# NEW ENGLAND INSTITUTE OF TECHNOLOGY

75 *Years*

1940

2015

QUALITY SERVICE

QUALITY SERVICE FOR STUDENTS, EMPLOYEES AND CUSTOMERS AT NEW ENGLAND INSTITUTE OF TECHNOLOGY IS KNOWLEDGEABLE AND INFORMED EMPLOYEES WORKING AS A TEAM TO PROVIDE MORE ASSISTANCE AND INFORMATION THAN EXPECTED, IN A CARING AND PROFESSIONAL MANNER, IN ORDER TO EMPOWER THE STUDENTS TO ACHIEVE THEIR GOALS.

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NEW ENGLAND INSTITUTE OF TECHNOLOGY
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AMERICA'S TECHNICAL COLLEGE

Welcome to
New England Institute of Technology!

We are pleased that you have chosen New England Institute of Technology to pursue your college education. As a college of technology, we are dedicated to providing you a balanced curriculum with hands-on learning and theoretical knowledge in your technical major, combined with an integrated core of liberal arts courses. Upon completion of your associate degree, you have the opportunity of pursuing a bachelor of science degree or master of science degree.

New England Tech places a high priority on student success and academic excellence in all of its programs. As a result, our graduates have been very successful in their chosen fields of study.

Your education at New England Tech will prepare you for the world of work and provide you with the skills and knowledge necessary to pursue your career. I encourage you to take full advantage of the services and opportunities the College provides.

We welcome many of you to our 220-acre East Greenwich Campus which we are sure you will agree represents your College's commitment to the highest quality educational experience.

Congratulations on your decision to attend the New England Institute of Technology.

Richard I. Gouse
President

MESSAGE FROM THE PRESIDENT

History of the College

For seventy-five years, New England Institute of Technology has met the challenge of preparing its graduates to enter an increasingly competitive workplace. Founded in 1940 as the New England Technical Institute, the present college began as a certificate-granting trade school. In 1971, a new administration, under the leadership of President Richard I. Gouse, envisioned a degree-granting institution that would not only be better qualified to meet industry's need for technically-trained workers, but would also become one of the top technical colleges in the nation.

When the Board of Regents of the State of Rhode Island granted the institution the authority to offer associate degrees in 1977, its name was changed to New England Institute of Technology (NEIT). In 1982, NEIT was accredited by the New England Association of Schools and Colleges, Inc. (NEASC). Two years later, in addition to associate degrees, the State of Rhode Island authorized NEIT to confer baccalaureate degrees and such other degrees, earned and honorary, as are usually conferred by colleges and universities in addition to its associate degree programs. By 1990, four new bachelor's programs had been added to the College's offerings. In 1995, the New England Association of Schools and Colleges' Commission on Technical and Career Institutions awarded accreditation to NEIT as a baccalaureate-granting institution. In 2005, the New England Association of Schools and Colleges continued NEIT's accreditation through its Commission on Institutions of Higher Education. In 2010, the College began enrolling students for its first master of science degree program.

Today, enrollment has grown to approximately 2,800 students from the 70 students enrolled in 1971. The original educational programs have increased to over 40 associate, bachelor's and master's degree programs in such diverse fields as automotive technology, business management, criminal justice, information technology, electronic systems engineering technology, mechanical engineering technology, nursing, occupational therapy, surgical technology, and digital media production. The campus that started in an older mill-style building in Providence, Rhode Island, now encompasses three locations in Rhode Island: two in Warwick and one in East Greenwich, Rhode Island, consisting of seven buildings with approximately 500,000 square feet of classroom, laboratory, faculty and administrative office space.

These dynamic changes to its program offerings and physical plant symbolize NEIT's vanguard journey into the 21st century and its response to the radical transformation that new technologies have brought to the workplace. The needs of tomorrow's students demand access to those technological resources that will enable them to realize technology's full potential to change their education and their lives. As it has since its beginning, NEIT has chosen to meet that challenge: the success of the College will continue to be measured by its graduates' accomplishments in the world they are entering both as workers and citizens.

Statement Of Mission And Objectives

The mission of New England Institute of Technology (NEIT) is to provide specialized associate, bachelor, and master's degree programs which prepare students for professional and technical careers. Through the combination of professional and technical courses and an integrated liberal arts core, academic programs emphasize the relevance of continuous learning to personal and professional growth. Upon successful completion, graduates are prepared to enter the workforce or to continue their education. As an extension of the primary mission, NEIT offers the opportunity to pursue professional and technological studies to satisfy personal interests.

As an institution primarily devoted to teaching, NEIT provides opportunities for students from diverse educational backgrounds and with varying levels of ability to study in a variety of technological fields.

NEIT's objectives are to:

1. offer technology programs that meet the career-oriented needs of students and to assist each student in identifying and developing a career path of interest.

2. stress the relationship between theoretical knowledge and practical application.

3. provide a laboratory approach, which prepares students for business and industry.

4. enable students to develop skills in writing, oral communication, and team building.

5. use innovative learning approaches to help each student realize his or her academic potential.

6. help students to develop skills in problem solving and in thinking logically, flexibly, and critically.

7. foster the student's potential to contribute to and participate in a rapidly changing technological society.

8. provide a campus climate where students are encouraged to respect the value of all people and to deal with the social problems and responsibilities they face as members of society.

9. encourage students to develop pride in the quality of their work.

10. create an appreciation for both the importance and joy of learning.

11. be environmentally responsible in the development and maintenance of its campus and to include environmentally responsible technologies in its curriculum.

GENERAL INFORMATION

Educational Philosophy

New England Institute of Technology is a private, non-profit, technical college whose mission is to provide specialized associate, bachelor's, and master's degree programs for students from diverse educational backgrounds and with differing levels of ability. The College's mission evolved from the principle that all persons, regardless of age, gender, disability, socioeconomic circumstances, religious, racial or ethnic background, should have access to career opportunities through a quality technical education. To achieve this purpose, NEIT is first and foremost an institution committed to teaching.

At NEIT, we believe and affirm that every student can learn; we recognize that different students may learn in different ways with differing levels of ability; and we recognize the importance of creating a learning environment in each classroom and laboratory that both challenges and supports each of our students.

Definition of an Educated Person

The New England Institute of Technology philosophy of education described in its Educational Philosophy is embraced firmly by faculty and staff. This philosophy is guided and sustained by the NEIT Statement of Mission and Objectives. It is intrinsic to the culture of the College and it is manifest in how and what the faculty teach and in what they expect of NEIT graduates as educated persons.

NEIT's graduates achieve technical competence, and develop the values and standards of professional and ethical behavior that can serve them well in both the workplace and in our democratic society. These values include responsible citizenship, an appreciation of and respect for cultural diversity, and an informed world-view.

NEIT anticipates that its graduates know how to observe and to read carefully, to analyze and evaluate facts and ideas, to reach valid and well-supported conclusions, and to communicate clearly. The College expects also that its graduates appreciate other fields of knowledge – science, the arts and humanities, and the social sciences – and that they are able to integrate what they have learned from these subjects within their technical fields.

The faculty strives to instill in their students the belief that knowledge coupled with experience leads to wisdom, and that education does not end with a degree, but continues throughout one's lifetime. In the process, NEIT graduates may discover the joy to be found in learning, the hallmark of an educated person.

Charter

New England Institute of Technology operates under a charter from the State of Rhode Island and is empowered by the State to confer associate and baccalaureate degrees and such other degrees as are usually conferred by colleges and universities.

Accreditation

New England Institute of Technology is accredited by the New England Association of Schools and Colleges, Inc. (NEASC), Commission on Institutions of Higher Education.

Accreditation of an institution of higher education by the New England Association indicates that it meets or exceeds criteria for the assessment of institutional quality periodically applied through a peer review process. An accredited college or university is one which 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, or 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 accreditation status by the New England Association should be directed to the administrative staff of the institution. Individuals may also contact:

> Commission on Institutions of Higher Education
> New England Association of Schools and Colleges
> 3 Burlington Woods Drive, Suite 100
> Burlington, MA 01803-4514
> (781) 425-7700
> E-Mail: cihe@neasc.org

NEASC is listed by the U.S. Department of Education as a nationally recognized accrediting agency under the provisions of Chapter 33, Title 38, U.S. Code, and subsequent legislation.

The programs listed below have specialized professional accreditations. Please check the program descriptions in the Curriculum section for details.

- Electrical Engineering Technology, B.S.
- Mechanical Engineering Technology, B.S.
- Medical Laboratory Technology, A.S.

- Nursing, A.S.
- Occupational Therapy Assistant, A.S.
- Occupational Therapy, M.S.
- Physical Therapist Assistant, A.S.
- Respiratory Care, A.S.
- Surgical Technology, A.S.
- Veterinary Technology, A.S.

Inquiries regarding the status of NEIT's accreditation by these organizations should be directed to the Office of Teaching and Learning.

Complaints concerning NEIT related to fraud or advertising, approval to operate, quality of education or accreditation requirements may be directed to the Rhode Department of Attorney General's Office, 150 South Main Street, Providence, RI 02903.

Campuses

New England Institute of Technology has three campuses in Rhode Island, two in Warwick and a 220-acre campus in East Greenwich, Rhode Island, all a short distance south of the state's capital, Providence.

The main campus in East Greenwich, opened in 2010, consists of one building containing 265,000 square feet of office, classroom, and laboratory space. Located on 220 wooded acres in a scenic New England town, this campus is headquarters to all administrative departments.

The Julian B. Gouse Campus, headquartered at 2500 Post Road, Warwick, consists of two buildings, containing more than 120,000 square feet of faculty and administrative offices, classroom and laboratory space, as well as a student lounge and an eating area. The Gouse Campus is named after the late trustee and benefactor of the college. Julian B. Gouse was a member of the original Board of Directors of the National Association of Trade and Technical Schools; a trustee of New England Institute of Technology; and, for twenty years, president of one of America's leading technical schools, Massachusetts Trade Shop School.

The nearby Access Road Campus in Warwick consists of four buildings, containing more than 114,000 square feet of office, classroom, and laboratory space featuring a custom-designed 53,000 square-foot facility dedicated exclusively for the training of automotive technicians which opened in April 2005. The Access Road Campus receives power from a 156 foot wind turbine and an array of 135 solar panels.

In addition, the automotive laboratory utilizes both energy recovery and geothermal technologies to supply pre-heated and pre-cooled fresh air into the facility.

All buildings on the Gouse, Access Road, and East Greenwich campuses were either originally designed or extensively remodeled to serve the institutional needs of the College, its mission and purposes. Laboratories have been conceived for the technology of the 21st century and they equal or surpass industry standards. Spacious and well-lighted, many of these combined classroom/laboratories have been custom-built to faculty and staff specifications. These facilities integrate computers into a highly functional setting for the technological training that is necessary to prepare students for successful applications in the workplace.

The College requires that all students be prepared to take classes and receive services at any of NEIT's locations where the appropriate classes and services are offered. It may not be possible for a student to take an entire program, including liberal arts courses, at one location.

Class Size

The usual size of technical classes at New England Institute of Technology is about 15 students. The average size of a liberal arts class is about 20 students. Smaller and larger class sizes are found from time to time in all programs.

Feinstein Enriching America Program

New England Institute of Technology is the recipient of a grant from the Feinstein Foundation. The objective of the Feinstein Enriching America Program is to promote the theme and values of caring, compassion, and community involvement. All students are encouraged to participate in this program which involves community-based volunteerism and may include academic credit.

Annual Security Report

NEIT distributes an annual security report to all current students and employees. Prospective students and employees may obtain a copy of the current report from the Business Office. The report includes campus policies regarding various security and emergency matters as well as statistics concerning the occurrence on campus of reported criminal offenses. In its 2014 report, NEIT had minimal incidents to report.

Student Consumer Information

Information about the institution and its administration of Title IV programs is provided to all current students and upon request to prospective students.

Admission to the Associate Degree Programs

Acceptance Criteria

A candidate for admission to the associate degree program must have one of the following:

1. A high school diploma;
2. A recognized high school equivalency certificate; or,
3. Verification of completion of a secondary school education in a home school setting that qualifies as an exemption from compulsory school attendance requirements under applicable state law.

Application Procedures

1. Applicants must schedule an interview with a college admissions officer.
2. Applicants must submit an application for enrollment along with the nonrefundable application fee. Applications may be obtained from NEIT or completed online at https://www.neit.edu/Admissions/Apply-Online.
3. Applicants must provide a certificate, signed by a physician, confirming that they have been immunized against measles, mumps, rubella, and varicella, that they have received a booster dose of tetanus and diphtheria (Td) within the last ten (10) years, and 3 doses of Hepatitis B vaccine or a positive titer.

Additional Requirements

Students entering an associate degree program will be assessed for skill levels in reading, writing and mathematics to determine their readiness to begin standard college work. Students whose assessment results show math, reading, and/or writing skills below college level may either be eligible to enroll in courses designed to strengthen those skills which they must satisfactorily complete before registering for technical courses, or they may be denied admission, unless exempt from this requirement by written consent of the Office of Teaching and Learning (OTL).

Individual programs may have additional requirements; consult with an Admissions Officer.

Acceptance

The student will be notified by the Admissions Office once an admission decision has been made.

NEIT reserves the right to refuse admission to any student for any reason other than race, color, religious belief, sexual orientation, gender identity or expression, national origin, age, or disability.

ADMISSION POLICY

Admission to the Bachelor's Degree Programs

Acceptance Criteria

A candidate for admission to the bachelor's degree program must have the following:

1. An associate in science degree from an accredited institution or be otherwise eligible for junior-level standing; and
2. For a Bachelor of Science Degree in Electrical Engineering Technology, a cumulative grade point average of 2.5 (out of 4.0). For all other bachelor's degree programs, a cumulative grade point average of 2.0 (out of 4.0) is required.

Application Procedures

1. Applicants must schedule an interview with a college admissions officer.
2. Applicants must submit an application for enrollment along with the nonrefundable application fee. Applications may be obtained from NEIT or completed online at https://www.neit.edu/Admissions/Apply-Online.
3. Applicants must provide a certificate, signed by a physician, confirming that they have been immunized against measles, mumps, rubella, and varicella, that they have received a booster dose of tetanus and diphtheria (Td) within the last ten (10) years, and 3 doses of Hepatitis B vaccine or a positive titer.
4. Applicants to a bachelor's degree program from institutions other than NEIT must submit an official post-secondary institution transcript to the Office of Teaching and Learning. To be considered official, transcripts must be received by NEIT directly from the issuing institution. If the student is to deliver transcripts, they must be in sealed, unopened envelopes and certified with the official seal of the issuing institution.

Additional Requirements

If a student does not have the appropriate prerequisite course(s), the student must complete those course(s) during the first or second quarter of the bachelor's program.

NEIT associate degree students who anticipate completing all technical courses required of the associate in science degree curriculum, yet need up to 8 liberal arts credits to earn their associate degree, will be accepted into the bachelor of science program contingent upon their ability to complete the outstanding associate-level course requirements during the first quarter of the bachelor's program.

Individual programs may have additional requirements; consult with an Admissions Officer.

Acceptance

Students will be notified by the Admissions Office once an admission decision has been made.

- Direct – Student meets all requirements for admission to the bachelor's degree program
- Provisional – Student's admission is based on his/her successful completion of appropriate prerequisite coursework, planned or in progress, during the first or second quarter of the bachelor's program. NEIT reserves the right to cancel a student's admission if prerequisite or liberal arts courses referred to in Additional Requirements (above) are not completed in the required quarter.
- Denied – Student does not meet criteria or requirements for admission to the bachelor's degree program.

NEIT reserves the right to refuse admission to any student for any reason other than race, color, religious belief, sexual orientation, gender identity or expression, national origin, age, or disability.

Admission to the RN to BSN Program

Acceptance Criteria

A candidate for admission to the RN to BSN degree program must have the following:

1. A transcript from a previous post-secondary institution verifying graduation with a nursing degree or diploma from an accredited institution of nursing with a minimum GPA of 2.0 and completion of the following prerequisite courses (or equivalent) with a C or better:
   - BIO 107 Comprehensive Anatomy & Physiology I with Lab
   - BIO 127 Comprehensive Anatomy & Physiology II with Lab
   - BIO 122 Microbiology
   - EN 102 Critical Thinking and College Writing
   - PS 140 Life Span Development
   - SO 203 Social Problems
   - Humanities Elective
   - Humanities Elective
   - Up to 58 credits for foundational liberal arts and science courses of "C" or better.
2. Must be academically qualified to sit for the NCLEX-RN but may take up to two quarters of liberal arts and NUR 300-level courses while preparing for the NCLEX-RN licensing exam.
3. Proof of a valid, unencumbered RN license from any state in the United States or U.S. territory prior to student's third quarter of enrollment.

Application Procedures

1. Schedule a phone interview with a college admissions officer.
2. Submit an application for enrollment along with the non-refundable application fee. Applications may be obtained from NEIT or completed online at https://www.neit.edu/Admissions/Apply-Online.
3. Arrange to have official transcripts from all colleges previously attended sent to the NEIT admission's department.
4. Submit a copy of Registered Nurse license (if attained).

Admission to the Master's Degree Programs

Acceptance Criteria

A candidate for admission to the master's degree program must have or submit the following:

Master's Degree in Information Technology

1. A bachelor's degree in IT or its equivalent from an accredited institution;
2. A cumulative grade point average of 2.5 (out of 4.0); and,
3. An essay (see your Admission's Officer).

Master's Degree in Occupational Therapy

1. An associate degree in occupational therapy from an ACOTE-accredited educational institution.
2. Current certification as an occupational therapy assistant by the National Board of Certification in Occupational Therapy (COTA).
3. A cumulative grade point average of 2.5 (out of 4.0).
4. An essay (see your Admissions Officer).
5. Readiness to begin advanced level college work as determined by an assessment of skill levels in writing.

Application Procedures (All Programs)

1. Applicants must schedule an interview with a college Admissions Officer.
2. Applicants must submit an application for enrollment along with the nonrefundable application fee. Applications may be obtained from NEIT or completed online at https://www.neit.edu/Admissions/Apply-Online.
3. Applicants must provide a certificate, signed by a physician, confirming that they have been immunized against measles, mumps, rubella, and varicella, that they have received a booster dose of tetanus and diphtheria (Td) within the last ten years, and 3 doses of Hepatitis B vaccine or a positive titer.

4. Applicants to a master's degree program who are attending or have graduated from institutions other than NEIT must submit an official post-secondary institution transcript to the Office of Teaching and Learning. To be considered official, transcripts must be received by NEIT directly from the issuing institution. Transcripts delivered by the student must be in sealed, unopened envelopes and certified with the official seal of the issuing institution.

Acceptance

Students will be notified by the Admissions Office once an admission decision has been made.

NEIT reserves the right to refuse admission to any student for any reason other than race, color, religious belief, sexual orientation, gender identity or expression, national origin, age, or disability.

Admission with Advanced Standing

Applicants may be admitted with advanced standing at the discretion of the Office of Teaching and Learning. Consideration is given to the following:

1. Credits from an accredited post-secondary institution. An official transcript must be submitted to the Office of Teaching and Learning. Academic credit will be given only to courses in which a student earned a "C" or above (transfer credit). A grade of "B" or above is required for transfer of credits for the Master of Science Degree in Occupational Therapy.
2. Credits through CLEP and challenge exams (challenge credit authorized by department chairs or the Director of Academic Skills).
3. Credit may be extended for past work experience which represents college-level skills or competencies and can be properly documented, verified, and related to educational objectives through the submission of a portfolio (portfolio review credit).

Contact the Office of Teaching and Learning, (401) 467-7744 Ext. 3438, for more detailed information.

Credit for Life, Military, and Work Experience

New England Institute of Technology allows technical and liberal arts credit for military, life, and work experience providing this experience is college-level, is related to the student's educational objectives, and can be properly documented and verified through the submission of a portfolio. Students desiring more information about credit for life and work experience should contact the Office of Teaching and Learning.

Transfer of Credit Policy

New England Institute of Technology will accept transfer credits from another accredited post-secondary institution which meet the following conditions:

1. An official transcript from the institution at which the coursework was completed must be submitted to the Office of Teaching and Learning.

2. The course(s) for which transfer credit is requested are equivalent in both credit hours and content to the theory and/or lab course(s) offered at NEIT. The student may be required to provide college catalog descriptions from the original institution for equivalency to be determined.

3. Coursework will be evaluated for current relevancy. Math, science, and technical courses must have been completed within 3 years of enrollment at NEIT; all other courses must have been completed within 10 years of enrollment at NEIT.

4. The student earned a grade of "C" (73%) or above in the course. A grade of "B" (83%) or above is required for transfer of credits for the Master of Science Degree in Occupational Therapy.

5. The student has not already attempted and failed the course at NEIT.

6. Transcripts must be received prior to the second class session of the class for any course in which the student is currently enrolled for consideration of transfer credit.

7. Transfer coursework for which credit is awarded will be recorded on the student's transcript without a grade designation and therefore will not be calculated in the student's grade point average but will be counted in computing satisfactory academic progress.

8. Requests for transfer credit from institutions located outside the U.S. will be evaluated on an individual basis with consideration of the above conditions.

9. A maximum of 50 transfer credits may be accepted.

Students may petition the Office of Teaching and Learning for consideration of special circumstances.

Upon completion of the credit review process, students will receive written notification of the NEIT courses for which transfer credit was accepted.

Associate Degree in Applied Technical Studies

The Associate Degree in Applied Technical Studies is designed for students who have previously gained skills and knowledge in specific occupations. The flexible curriculum for this degree is tailored to meet the student's professional and career goals and is chosen from selected technical courses by the student and the Assistant Provost. Admission to the program is limited to adult learners with work or military experience. Students desiring more information about the degree should contact the Office of Teaching and Learning.

Admissions Tour

All prospective students, along with their families and friends, are encouraged to visit the College. A tour may be scheduled in conjunction with an on-campus admissions interview. Tours may also be scheduled by calling the Admissions Office for an appointment at 800-736-7744. The Admissions Office is open Monday through Thursday from 7:30 a.m. to 8 p.m., Fridays 7:30 a.m. to 4 p.m.; and Saturdays 9 a.m. to 12 noon.

International Admissions

New England Institute of Technology welcomes applications from international students. Currently, international students at the College represent 24 countries from Asia, Europe, the Caribbean Basin, North America, Central America, Africa and South America. The College offers a wide array of support systems specifically geared toward the needs and culture of the international community.

International applicants must meet the domestic admission requirements set forth in the Admissions section of this catalog (above) to qualify for admission to NEIT. To apply to NEIT, an international student must submit an application. Applications may be mailed, but the fastest and most efficient way to submit an application is online at https://www.neit.edu/Admissions/International-Students/International-Application. Candidates for whom English is not their first language must demonstrate fluency in English and must submit a recent TOEFL, IELTS, or PTE score. Students eligible for admission to NEIT will be contacted. After an eligible student has paid the application and registration fees, NEIT will mail a letter of acceptance and an enrollment package to the student. All information submitted to the College should be sent to the attention of the International Admissions Office.

Upon receipt of the enrollment package and student's affidavit of financial support, the school will issue the necessary immigration paperwork to obtain a U.S. Student Visa.

Non-Matriculated Students

Students who are not admitted to a degree program, or who do not seek degree candidacy, may be permitted to take a limited number of courses in a Non-Matriculated Status.

Authorization to take courses is granted by the Office of Teaching and Learning based on evidence that the students are capable of successfully completing the courses for which they seek to register.

Acceptable evidence may include successful completion of college courses at other institutions of higher education, standardized test results such as the SAT, or satisfactory performance on the appropriate NEIT Assessment Test as reported by the Academic Skills Center.

Registration of non-matriculated students will be reviewed for satisfactory performance by the Office of Teaching and Learning each quarter. Non-matriculated students may register for a maximum of thirty credits. Authorization to register beyond the thirty-credit limit may be granted by the Office of Teaching and Learning.

Students registered in non-matriculated status will enjoy all the privileges of classroom participation; registration and grades for all courses will be recorded on an official College transcript. Those who subsequently wish to become degree candidates must follow the standard application procedures for admission. Credits earned in a non-matriculated status will be evaluated by the Office of Teaching and Learning as to their pertinence and applicability in satisfying the requirements for the degree for which the student applies. All degree candidates must be formally admitted as matriculated students.

TUITION

Full-Time Students

Normally, for purposes of tuition assessment, NEIT defines a full-time course load as 10 technical credits per quarter. Some quarters may include some liberal arts courses to achieve 10 credits. The tuition for these quarters will remain at the full-time tuition rate.

Please note that NEIT's definition of full-time for purposes of tuition assessment differs from the definition of a "full-time student" used by the federal government for the purpose of awarding financial aid. See the section on Financial Aid for additional details. Please contact the Student Accounts Office for further information on tuition.

Part-Time Students

Students enrolled in an approved part-time curriculum may take up to 6 technical credits per quarter or up to 10 technical and liberal arts credits per quarter. Part-time students pay tuition at the part-time rate in effect at the time they enroll in the part-time program.

Non-Matriculated Status

Students who have not enrolled in a degree program of study but wish to take individual courses will pay the cost-per-credit rate in effect at the time they enroll for the course.

Program Rate Charge for an Individual Course

Students repeating an individual course or taking an elective course not required for graduation pay the program rate charge in effect at the time they take the course.

Students who have transfer, portfolio review, or challenge credits approved by the Office of Teaching and Learning will receive a tuition reduction for transferred technical courses subject to certain restrictions. The tuition reduction, computed on a program rate basis, will be applied in the final quarter of the student's curriculum to offset the tuition assessment. No tuition credit is allowed for non-technical courses.

Students who elect to take the technical portion of the curriculum at a faster rate than the rate specified in the enrollment agreement will be assessed additional tuition charges.

An insert has been provided with this catalog containing up-to-date tuition and fees. For further information, please write the Director of Admissions, New England Institute of Technology, One New England Tech Boulevard, East Greenwich, RI 02818-1205, or telephone (401) 467-7744 or refer to the College website at: http://www.neit.edu/Financial-Aid/Tuition.

FEES

Application Fee

A non-refundable application fee is due at the time of application.

Registration and Administrative Fees

A registration fee is charged at the beginning of the first academic quarter. An administrative fee is

TUITION AND FEES

charged at the beginning of each academic quarter. These fees cover the costs of administrative processing required for each student to register for each academic quarter and are non-refundable. See the tuition and fee insert for current rates.

Student and Technology Fee

These fees are charged at the beginning of each academic quarter. These fees assist NEIT in providing the required hardware and software throughout the institution; internet accessibility; and in covering the costs of school-sponsored services such as student accident insurance, the maintenance of the student parking areas, parking stickers, and the I.D./Library card. See the tuition and fee insert for current rates.

Laboratory Fees

A laboratory fee is charged at the beginning of each academic quarter. It covers the costs of equipment and material used in all technical courses. See the tuition and fee insert for current rates.

Other Fees

There may be other incidental charges assessed for certain courses to cover material that will be consumed during the period of study.

Cancellation Policy

Should an applicant not be accepted by the Admissions Office, the applicant will receive notification. New England Tech will make a complete refund of all monies paid less the non-refundable application fee.

Applicants who have been accepted by the Admissions Office may cancel their enrollment at the College prior to starting classes by written notice to the Director of Admissions. Students who cancel their enrollment or do not attend one class will receive a 100% refund of all payments less the non-refundable application, registration and administrative fees.

NEIT reserves the right at any time and for any reason not prohibited by law to return any tuition and fees or part thereof to any registered student who in the opinion of the College is unfit for the profession selected.

Institutional Tuition and Fees Refund Policy

1. Students who withdraw from NEIT must notify the Registrar's Office in writing. Absence from class does not constitute withdrawal.
2. All refunds of tuition, registration, administrative, student, and lab fees are calculated on an academic quarter basis.
3. Written notification received by the Registrar:
   - In the first week* of class will result in a refund of 75% of the quarter's tuition and fees.
   - In the second week* of class will result in a refund of 50% of the quarter's tuition and fees.
   - In the third week* of class, will result in a refund of 25% of the quarter's tuition and fees.
   - After the third week* of class will result in no refund.

*Note: A week is an academic week, which begins on Sunday and ends on Saturday. An academic quarter is comprised of ten (10) weeks.

Return of Funds

Federal, state and institutional financial aid will be returned to the appropriate source (e.g., federal, state or other lender) in accordance with federal and state regulations in effect at the time of the student's withdrawal. Information about the requirements for determining the treatment of Title IV funds when a student withdraws is available in the "Student Guide to Financial Aid" which may be obtained in the Financial Aid Office. See also: "Refunds to Financial Aid Programs" in the Financial Assistance section of the catalog.

Repeating a Course

Subject to certain restrictions, students are allowed one opportunity to repeat one failed course without incurring any additional tuition cost. Students are strongly encouraged, prior to scheduling repeat courses, to contact the Student Accounts Office for additional details, including certain restrictions that may exist.

Repeat Fee

Students are required to complete liberal arts courses as part of their curriculum. There are five liberal arts core areas: Communications, Arts/Foreign Language, Math/Science, Humanities, and Social Sciences.

Effective January 1, 2014, students will be charged for repeated attempts to complete liberal arts courses as follows: When a student fails or withdraws from a liberal arts course for the first time, the student will have only one opportunity to repeat that course, or take a different liberal arts course from the same core area in its place at no additional charge. After one repeat of the same liberal arts course or its substitute, the student will be assessed a tuition fee of $200 (plus applicable fees). For example, a student will be assessed a tuition fee of $200 (plus applicable fees) if he/she fails or withdraws from HU 244 twice and either repeats it again or takes HU 250 in its place.

Once a student has exercised his/her one opportunity to repeat a course or take a different liberal arts course from the same liberal arts core in its place at no additional charge, the student will be charged a tuition fee of $200 (plus applicable fees) for any future course repeats or substitutes within the same liberal arts core area. Please contact your Student Advisor if you have any questions.

FINANCIAL ASSISTANCE

Financial aid at New England Institute of Technology is available from a variety of sources: non-repayable grants, scholarships, work study programs, student loans, and NEIT's own tuition payment plan. Applicants may receive aid through any or all of these programs, depending on their financial need.

All applicants are required to meet with a financial aid officer. The officer will review the availability of grants and loans and will provide assistance in completing the required financial aid applications.

Financial Aid programs available are:

Federal Pell Grant
Federal Supplemental Educational Opportunity Grant (FSEOG)
Federal Work Study (FWS)
Federal Stafford Loan Program (FDSL)
Federal Parent Loan for Undergraduate Students (FPLUS)
State Grants
Private Scholarships and Loans
Institutional Scholarships and Loans

For a listing of eligibility requirements for federal, state, institutional and private funding sources please refer to the Student Guide to Financial Aid available in the Financial Aid Office.

Veterans Benefits

Eligible veterans receive benefits as determined by their course of training and federal regulations. Each student receiving veterans benefits is required to verify his/her enrollment at NEIT by calling the VA Regional Office monthly. NEIT is required to notify the Veterans Administration of any changes in a student's course load or status. Such notification may result in the termination of veterans benefits to the student, but does not relieve the student of his or her financial obligation to NEIT.

Financial Aid Awarding Policy

NEIT takes into consideration all financial sources when awarding aid to eligible applicants. For the purpose of this policy, "aid" includes grants, loans, and scholarships of any form.

If, after initial awards have been made, a student receives aid which brings his or her total aid package above the "cost of attendance" (the total amount it is determined it will cost a student to attend NEIT), NEIT will re-assign some of the institutional funds awarded to the student.

It is the intention of this policy to ensure that aid resources are made available to as many students as possible.

Application Requirements

Applicants interested in any of the financial aid programs available at NEIT should contact the Financial Aid Office for applications and for further information. Financial aid awards are not automatic. Students must file a Free Application for Federal Student Aid (FAFSA) with the NEIT Financial Aid Office for each award year that they are in college. All students receiving financial aid have certain rights and responsibilities. A document outlining these rights and responsibilities is available in the Financial Aid Office.

Federally Defined Full-Time Status

For the purposes of determining a student's eligibility for financial aid, NEIT's Satisfactory Academic Progress Policy defines a student as "full-time" if the student is taking a minimum of 12 academic credits. Students taking fewer than 12 academic credits may be defined as three-quarter, half time or less than half time. See the Financial Aid Office for additional information.

Satisfactory Academic Progress Policy

Federal requirements require that each postsecondary educational institution participating in federal student financial aid assistance programs establish, publish and apply standards of satisfactory academic progress for those students receiving federal student financial assistance. Students receiving federal student financial assistance are expected to maintain satisfactory academic progress throughout their program in order to continue their eligibility for federal student financial assistance. The measurement of satisfactory academic progress requires an evaluation of the student's quantitative progress and qualitative progress. The qualitative measure requires that the student maintain a specific cumulative grade point average throughout his or her program of study. The quantitative measure requires that the student complete the program within 150 percent of the normal length as measured in terms of attempted credits versus completed credits. The Satisfactory Academic Progress Policy for student financial aid recipients is at least as strict as the policy used for non-financial aid recipients.

The evaluation for both the qualitative and the quantitative measures will be conducted at the end of every third quarter from the student's initial enrollment at New England Institute of Technology.

If, at the end of that period, the student does not meet the minimum requirements established in the chart on the next page, the student will not be eligible for federal student financial assistance, but may continue attending NEIT using his or her own sources of funding.

Requirements for Maintaining Satisfactory Academic Progress:

1. Maximum Time to Complete

A student may attempt a maximum of 150% of the published length of the program and still maintain his/her eligibility for federal student financial assistance. After a student has attempted 150% of the published length of the program, the student will no longer qualify for federal student financial assistance.

The published length of an associate degree program is the minimum number of credits required to graduate from the program. For example, if 98 credits are required for graduation, a student may attempt a total of 147 credits (98 X 150%).

The published length of a bachelor's degree program is the combined minimum number of credits required to graduate from both the bachelor's and associate degree programs. For example, if 98 credits are required for graduation from the associate degree program and 92 credits are required for graduation from the bachelor's degree program, a student may attempt a total of 285 credits (190 X 150%).

2. Successful Completion of the Program

At the end of every third quarter of the student's program, students will be expected to complete a specified percentage of attempted credits as described in the chart in section 4.

Attempted credits include the published number of credits for all courses for which the student receives a grade of A, A-, B+, B, B-, C+, C, C-, D+, D, F, W, P, S, U, IPR, or AU while the student is enrolled in a program of study at NEIT (see Academic Regulations in the Office of Teaching and Learning section of the catalog for further clarification of grades). With the exception of remedial courses, all credits the student attempts are used in computing satisfactory progress, including credits for repeated courses. The published number of credits for any course taken for non-credit, as well as credits that a student transfers from another institution, are used in computing satisfactory progress.

When a student changes major, only credits for those courses that apply to the new program are counted as attempted credits.

3. Qualitative Measure

At the end of every third quarter of a student's program, students will be expected to maintain a minimum cumulative grade point average (GPA) as described in the chart in section 4.

The cumulative grade point average is based on credits attempted in all courses which carry credit toward graduation. Courses which carry grades of W, P, S, U, IPR, or AU, are not included in a student's GPA. When a course is repeated, only the higher grade is included in the cumulative grade point average. Credits that a student transfers from another institution are not included in the student's GPA.

The cumulative GPA for bachelor's students and master's students includes all credits for courses taken in the associate degree program at NEIT which carry credit toward graduation.

4. Progress Required to Continue Eligibility for Financial Aid in the Associate in Science Degree Programs and the Bachelor of Science Degree Programs.

If at the end of three quarters the total number of credits you have attempted is:	then you will be required to have a minimum cumulative GPA of:	and to have successfully completed this percentage of total attempted credits:
0-16 (A.S. Degree only)	1.6	30%
17-36 (A.S. Degree only)	1.7	40%
37-54 (A.S. Degree only)	1.8	50%
55-96 (A.S. Degree only)	1.9	60%
97 or more or you are enrolled in a bachelor's or master's degree program	2.0	67%

5. Loss of Qualification for Financial Aid Assistance

Students who fail to achieve satisfactory academic progress at the end of a third quarter measurement will not be eligible for financial aid assistance unless they can, through the appeal process set forth below, demonstrate special circumstances which impeded their ability to successfully achieve satisfactory academic progress.

6. Appeal Process and Continuation of Eligibility for Financial Aid Assistance

A student who is no longer eligible for financial aid due to his or her failure to maintain satisfactory academic progress may appeal to the Financial Aid Office. If the student is able to demonstrate through documentation, to the satisfaction of the Financial Aid Office, that his/her failure to make satisfactory academic progress was due to special circumstances which impeded the student's ability to

successfully achieve satisfactory academic progress, the student will be allowed to continue his or her eligibility for financial aid assistance on a quarterly basis. This eligibility is subject to the student's achieving specified conditions set forth in a plan provided by the Financial Aid Office.

If at the end of any quarter, the student fails to achieve the specified conditions, the student will no longer be eligible for financial aid assistance.

7. Re-Establishment of Eligibility for Financial Aid

A student who is no longer eligible for financial aid assistance due to failure to maintain satisfactory academic progress will again be eligible for financial aid assistance when and if the student achieves the cumulative grade point average and percentage of courses completed listed on the chart above. During the student's period of disqualification for financial aid assistance, the student may continue his or her program of study at the institution using his or her own sources of funding as long as the student meets all other academic requirements of the institution.

Refunds to Federal Aid Programs (Title IV)

The Federal "Return of Title IV Funds" requirement is applied to the account of any student who leaves school before graduation.

NEIT must determine the amount of Title IV aid earned by the student. If there is Title IV aid that needs to be returned ("unearned funds"), the aid must be returned in the following order: Federal Stafford Loans, Federal Plus Loans, Federal Pell Grants, Federal SEOG, and finally to any other Title IV programs.

Federal regulations may allow NEIT to keep only a portion of the Title IV aid, which includes FDSL/FPLUS Loans, if the student leaves school before the end of the academic year. A student who has used FDSL/FPLUS Loans to pay tuition may have a balance due NEIT if the student withdraws before the end of the academic year.

There may be a responsibility for both NEIT and the student to return unearned funds to the lender and/or the Department of Education.

See also "Institutional Tuition and Fees Refund Policy" in the Tuition and Fees Section of the catalog.

Institutional Financial Aid Policy

Institutional grants and scholarships for students who withdraw from NEIT will be prorated and refunded as outlined in the institutional "Tuition and Fees Refund Policy" in the Tuition and Fees section of the catalog.

Books and Equipment Policy

NEIT publishes a list of books and equipment that each student will be required to purchase for each course. Books and equipment may be purchased at a bookstore of the student's choice, including NEIT's bookstore, or from an online vendor.

The Career Services Office

The Career Services Office offers assistance to students and graduates in many aspects of the job search. Workshops are conducted to enhance students' job seeking skills. Students are also encouraged to meet individually with members of the Career Services staff to perfect their resumes, interviewing skills, and job search techniques. Students are also invited to visit the Career Services Office, the Library, and the Library's website (http://library.neit.edu/) to review instructional job search materials.

Many employers use NEIT as a resource when recruiting new employees by submitting job leads directly to the NEIT Career Services Office. The Career Services staff also contacts employers to identify employment opportunities for students and graduates. Students and graduates may review the names of company contacts as well as other reference materials to identify job lead sources. Part-time employment listings are also available in the Career Services Office and posted on campus bulletin boards. The Career Services Office also hosts recruitment events which are held on campus throughout the year.

Students are eligible to receive assistance in obtaining full-time employment in their field of study when they have fulfilled graduation requirements, have met all of their financial obligations, and have submitted a resume in an NEIT approved format to the Career Services Office. Students' resumes will be circulated, as appropriate, to employers who are looking for candidates with technical skills. It is the College's policy that students who fail to submit a resume and/or keep appointments with prospective employers or with the Career Services staff are formally acknowledging that they are unavailable for employment assistance.

Office of Student Support Services

Students Advisors serve as the primary point of contact for students to assist them in reaching their educational goals. They provide the information, support and encouragement necessary in addressing students' questions and concerns, and they provide guidance to students regarding college policies and procedures.

Students should contact their Student Advisor with any questions they may have, including questions about NEIT degree requirements, NEIT policies and procedures, and campus resources. The Student Advisor is available to assist students experiencing difficulties with coursework and problems that may interfere with the successful completion of their programs, so the students can have a positive and successful experience throughout their education at NEIT.

Student Activities

The Student Activities Coordinator works with students and faculty to provide activities that are of interest to NEIT students. Students are encouraged to participate in student clubs and student activities to enhance their leadership skills and to meet other students.

STUDENT SERVICES

Housing

A housing coordinator is available in the Office of Student Support Services whose primary responsibility is to assist students in locating housing in the area. All rental/lease and other arrangements are strictly the responsibility of the student and the property owner or property manager. NEIT's role is limited to facilitating the acquisition of housing for those unfamiliar with the area. While efforts are made to provide students with a variety of housing options, NEIT does not make any representations about the safety of neighborhoods in which any particular housing is located. Students are advised to check with the local authorities regarding the safety of any neighborhood in which they are considering renting. Students are responsible for their choice of housing.

Students' Rights and Responsibilities

College policies, rules and procedures setting forth student rights and responsibilities are published in this catalog and in the Student Handbook. It is the student's responsibility to review these publications. Copies of the most recent versions of these publications are available on the password-protected New England Tech Student Home Page, https://students.neit.edu/.

Student Conduct

It is expected that each member of the college community will responsibly participate in a cooperative learning experience. To ensure the success of this experience, the College requires a community which encourages mutual respect. Students who have concerns of any kind are urged to consult immediately with an appropriate member of the college community. Students who are unclear as to who may best resolve their concerns should consult the Office of Student Support Services. This office will refer the student to the appropriate department and will assist students as necessary.

Students who have conflicts involving staff, other students, academic matters or any other aspect of their college experience should follow the procedures outlined in the Student Handbook entitled "Student Conflict Resolution Procedure."

Any student who feels he/she was unfairly disciplined or dismissed may petition in writing as published in the Student Conduct and Disciplinary Procedures.

Students' Right to Privacy and Access to Records

New England Institute of Technology complies with the provisions of the Family Educational Rights and Privacy Act of 1974 (FERPA). A "Notification to Students on Rights to Privacy" is e-mailed to students annually and published in the Student Handbook. Copies of the College's notification are available in the Registrar's Office.

Student Conduct and Disciplinary Procedures*

It is a major objective at NEIT to protect and preserve the quality of the educational environment for everyone. This objective entails two basic expectations:

That the NEIT community expects high standards of respect, courtesy, integrity, and responsibility from all of its members.

That each student is responsible for his/her conduct, and that continuation as a student is conditional upon compliance with the requirements expressed or implied in this policy.

College officials are charged with the welfare of all students. It is in this regard that NEIT reserves the right to take necessary and appropriate action to protect the safety and well-being of the campus community.

Disregard on the part of the student for the college's rules, regulations or policies, or exhibition of behavior by a student, on- or off-campus, that in the sole judgment of college officials demonstrates a serious lack of respect for other members of the campus community or that could be considered a potential safety threat to the campus community may require the immediate application of sanctions or disciplinary action up to and including dismissal.

It is neither possible nor necessary to specify every instance of misconduct that could result in sanctions, disciplinary action or dismissal from the college. Grounds for sanctions, disciplinary action or dismissal include but are not limited to: the use, possession or sale of intoxicating beverages on campus; the use, possession or sale of illegal drugs on campus; gambling on campus; insubordination; nonpayment of financial obligations; the unauthorized use of school equipment including computers and computer systems; academic dishonesty; plagiarism; violation of copyright laws; assault; harassment; disruptive, disorderly or indecent behavior; serious criminal offenses; or failure to exhibit the highest quality of behavior, good citizenship and respect for the campus community, both on- and off-campus.

Disciplinary action is based upon the nature and severity of the matter and on general principles of fair treatment. Disciplinary actions will take into account the effect of the conduct on the victim and/or college community, the student's disciplinary history, and/or whether disciplinary actions such as warnings or probation are likely to change the student's conduct. While every attempt will be made to fairly and consistently administer its disciplinary procedures, NEIT will also seek to be responsive to the facts and circumstances of each individual case. Some disciplinary actions may be more punitive than others due to the seriousness of the offense.

Sanctions or dismissal of the student under this policy does not terminate the student's or guarantor's obligation to meet his or her financial obligations to NEIT.

*This is intended to be a summary of NEIT's Student Conduct and Disciplinary Procedures. The entire policy is published in the Student Handbook and includes a listing of NEIT personnel with authority for imposing disciplinary action and the process for student appeals.

THE OFFICE OF
TEACHING AND LEARNING

The Office of Teaching and Learning is responsible for the overall quality control and management of all curricula, faculty and academic staff, academic support services, class scheduling, classroom and laboratory instruction, and academic records management. The Office of Teaching and Learning includes:

- The Office of the Senior Vice President and Provost
- The Registrar's Office
- The Library and Information Commons
- The Academic Skills Center
- The Faculty Resource Center
- The Feinstein Enriching America Program
- Department Chairs
- Faculty
- Office for Institutional Effectiveness

The Office of Teaching and Learning is managed by the Senior Vice President and Provost (the chief academic officer of the College) and the Assistant Provosts. All inquiries concerning the Office of Teaching and Learning should be directed to (401) 739-5000, Ext. 3438.

Academic Regulations

Grading System

Grade	Point Value	Percent
A	4.00	93-100
A-	3.67	90-92
B+	3.33	87-89
B	3.00	83-86
B-	2.67	80-82
C+	2.33	77-79
C	2.00	73-76
C-	1.67	70-72
D+	1.33	66-69
D	1.00	60-65
F (Failure)	0.00	below 60

Failures may not be made up, except by repeating, or, with permission, by passing the course at an approved institution. When a student repeats a course for which an "F" grade was received, both grades will appear on the transcript, but only the higher grade will be used in calculating the grade point average.

W   Received by students who officially withdraw from a course before the end of the drop period.

P   Satisfactory completion of a "Pass/Fail" course for credit.

CH   Challenge credit awarded as a result of passing a challenge exam.

S   Satisfactory completion of a non-credit course.

U   Unsatisfactory completion of a non-credit course.

IPR   In Progress – must be completed to meet graduation requirements.

AU   Audit indicates registration and attendance in a course for which no examinations, evaluation or credit are given.

ML   Military Leave, assigned to students who are called to active duty and must withdraw prior to the end of a quarter.

PR   Portfolio review credit awarded after assessment of student life experience portfolio.

TR   Transfer credit from another accredited postsecondary institution.

Grade Point Average

Grade points are computed by multiplying the number of credit hours for the course by the weighted point value of the grade (see Grading System). For example: A grade of B+ (with a grade point value of 3.33) in MA 125, a four-credit course, is assigned 13.32 grade points (3.33 x 4). The cumulative grade point average (GPA) is obtained by dividing the total number of grade points achieved by number of credit hours of work completed.

Courses for which transfer credit was awarded and courses with P, S, U, and W grades are not included in the GPA calculations.

Credit Hour

A credit hour is central to the preparation of curricula at New England Institute of Technology. The number of credit hours assigned to coursework is related to the academic time a student is expected to spend in direct faculty instruction and out-of-class work.

A credit hour reasonably approximates not less than: One hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week for approximately ten weeks for one hour of credit; or at least an equivalent amount of work for other academic activities as established by NEIT including laboratory work, internships, practica, studio work, and other academic work, such as study and exam preparation time, leading to the award of credit hours.

Academic Probation

Academic probation is a provisional status given to a student who is not meeting the College's requirements for academic achievement. A student who does not meet the College's requirements for academic achievement (see "Required Levels of Achievement" on next page) will be placed on academic probation. A student who is placed on probation must meet with a Student Advisor in the Office of Student Support Services to discuss academic problems and develop a plan to address the problems.

A student who has met the College's requirements for academic achievement by the end of the probationary quarter will be taken off probation. A student who has not met the College's requirements for academic achievement at the end of the probationary quarter will remain on probation for a second quarter.

A student who has met the College's requirements for academic achievement by the end of a second probationary quarter will be removed from probationary status if the student's cumulative GPA meets the minimum requirements. A student who has had a successful academic quarter but whose cumulative progress does not meet the academic standards required by his/her program will remain on probation for an additional quarter. A student in a second probationary quarter who has not had a successful academic quarter and whose achievement does not meet the cumulative GPA college requirement will be dismissed from the College.

Students may not take more than 19 credits during their first probationary quarter and not more than 16 credits during their second probationary quarter. A student who is on academic probation must contact his/her Student Advisor to review and discuss the proper course load for the successive quarter.

Required Levels of Academic Achievement

Any student who does not meet the following standards for quarterly grade point average and/or for cumulative grade point average will be on probation for the following quarter:

Credits Completed	Quarterly GPA	Cumulative GPA
Associate Degree Program		
< 36 credits completed	1.0	1.7
36-71 credits completed	1.0	1.8
72 and above	2.0	2.0
Bachelor's Degree Program	**2.0**	**2.0**
Master's Degree Program	**3.0**	**3.0**

Note: Students should check the Question and Answer document for their respective programs to determine specific criteria (e.g., grades and/or cumulative grade point average) necessary to remain in good academic standing. Additionally, it is the student's responsibility to maintain an awareness of any changes in criteria that would affect a student's enrollment status.

Appeal of Dismissal

A student who has been dismissed because his/her other academic achievement does not meet college requirements may appeal the dismissal to the Office of Teaching and Learning. Consideration will be given to extenuating circumstances that led to poor academic achievement. Students who successfully appeal a dismissal will be placed on second probation.

Dean's List and Honors

The Office of Teaching and Learning publishes a Dean's List at the end of each quarter for students enrolled in associate and bachelor's degree programs. The Dean's List recognizes students who have earned at least 10 matriculating credits and a GPA of at least 3.6. The grades of P, S, U, and W are not considered in the GPA calculation for Dean's List. Graduates with a cumulative GPA of 3.6 or better are cited at commencement "With Honors."

Alpha Chi Honor Society

Alpha Chi is an academic honor society that recognizes and promotes excellence in scholarship among college and university students of good character. As a general honor society, Alpha Chi accepts members from all academic fields, and inducts no more than the top 10 percent of junior, senior, and graduate students at member institutions. NEIT's chapter of Phi Theta Kappa is Rhode Island Gamma, Chapter #395.

Phi Theta Kappa

Phi Theta Kappa is an international honors society for associate-level students. The society recognizes those students who have achieved academic excellence by achieving a cumulative grade point average of at least 3.8 and 24 credit hours. Membership provides opportunities for leadership and involvement in college and community service. NEIT's chapter of Phi Theta Kappa is Beta Xi Phi.

Progress Reports

Grade reports are available at the end of each quarter on the student website through the link labeled "Web for Students." Grades are based on student academic achievement.

Graduation with an Associate Degree

To be eligible for graduation with an associate in science degree from NEIT, students must:

1. successfully complete all courses listed in the curriculum they are pursuing;
2. have a cumulative grade point average of at least 2.0 (unless otherwise indicated by program);
3. complete the last 34 credit hours at NEIT as a residency requirement and have received academic credit for the balance of the program; and,
4. fulfill all financial obligations to the College.

Graduation with a Bachelor's Degree

To be eligible for graduation from NEIT with a bachelor of science degree, students must:

1. successfully complete all courses listed in the curriculum they are pursuing;
2. have a cumulative grade point average of at least 2.0 (unless otherwise indicated by program);
3. complete the last 60 credit hours at NEIT as a residency requirement and have received academic credit for the balance of the program; and,
4. fulfill all financial obligations to the College.

Residency requirements may be partially waived with the written permission of the Office of Teaching and Learning.

Graduation with a Master's Degree

To be eligible for graduation from NEIT with a master of science degree, students must:

1. successfully complete all courses listed in the curriculum they are pursuing;
2. have a cumulative grade point average of at least 3.0;
3. complete the last 60 credit hours at NEIT as a residency requirement and have received academic credit for the balance of the program; and,
4. fulfill all financial obligations to the College.

Dual Degree Policy

A dual degree, for the purposes of this policy, refers to the pursuit of a second associate degree or a second bachelor's degree at the New England Institute of Technology. Students may pursue a second associate degree or a second bachelor's degree by completing a minimum of 34 additional technical credits in the second degree program. The additional technical credits in the second degree program shall be comprised of the technical degree requirements in the second program as well as any technical electives as approved by the Department Chair. Technical electives will be approved with consideration of relevancy to the chosen field of study. Liberal arts courses may only be included as part of the additional technical credits if the second degree program requires specific core electives not already completed in the first degree program. All requests for a dual degree must be approved by the Office of Teaching and Learning.

General Graduation Information

The formal graduation ceremony is limited to students who complete all requirements for a degree on or before the end of the Spring Quarter.

Transcripts and Letters of Technical Proficiency

Students may request an official transcript from the Registrar's Office listing courses and grades earned. Any student who completes the technical core courses of a program or a specific technical segment (e.g., the Plumbing portion of the Plumbing/Heating Technology associate degree) may request a Letter of Technical Proficiency from the Registrar's Office. This letter will document the student's grades earned and courses completed in a technical area. Transcripts and Letters of Technical Proficiency are issued only for students who have fulfilled all financial obligations to the College.

Drop and Add Policy

Students may add or drop courses after the start of classes in compliance with the procedures described in NEIT's Drop and Add Policy which is published in the Student Handbook.

PLEASE NOTE: Dropping a course and reducing your credit load may adversely affect your financial aid eligibility and your ability to graduate within the anticipated time frame. It is strongly recommended that students meet with a representative of the Student Accounts Office to discuss the potential impact on their financial aid status and with their Student Advisor to discuss the impact on their ability to complete their degree within the anticipated time frame.

Class Attendance

Regular and prompt attendance at all classes is expected of all students. Each course syllabus clearly states the attendance policy and the makeup policy for that class. All work missed by reason of absence or tardiness, regardless of the cause, must be made up to the satisfaction of the instructor. Students who know that they will be absent are expected to obtain assignments from instructors in advance so that the necessary work will be completed before they leave or immediately upon their return.

Schedule of Classes

Day classes are held between 7:30 a.m. and 5:35 p.m. Night classes are held Monday through Friday between 5:45 p.m. and 10:40 p.m. Some courses are also offered on Saturday between 8:00 a.m. and 4:30 p.m.

Library and Information Commons

The NEIT Library and Information Commons contains a comprehensive collection of materials to support

the research, professional and personal growth needs of the college community. Both print and digital resources are available in a welcoming environment with a variety of spaces for study, collaborative work, and research.

The Library provides a cultural center for the College presenting an annual all-college art show, rotating exhibits of class work in the fine and applied arts, and offering lectures and presentations on wide-ranging topics.

A comprehensive website (library.neit.edu) provides access to library resources such as the online catalog, full-text databases, and web pages pertaining to each technology, program, and all elective classes. These online resources are available at all times and are designed to support student success in class and in the workplace.

Academic Skills Center

The overall goal of the Academic Skills Center (ASC) is to address the learning needs of the NEIT student population by helping prepare them to become effective, self-directed, lifelong learners. This support begins with the assessment of enrollees in reading, writing and mathematics during the Admissions process, followed by placement into their first quarter classes. The ASC's academic support of students continues throughout their degree programs and post-graduation.

A range of services is offered by the ASC on a walk-in basis or by appointment. A Study Skills workshop is offered to all new students prior to the start of classes. The Center offers pre-college courses in reading, writing and mathematics to help students prepare for college-level coursework. Enrichment courses are provided to help students strengthen their basic academic skills.

In addition, the ASC provides professional tutoring for all interested students in the fields of reading, writing, mathematics, physics, and many of the sciences. The ASC's professional staff are available to provide online tutoring for those interested.

Technical Advisory Committees

Each academic department has a Technical Advisory Committee. The Technical Advisory Committee consists of representatives from many of the industries and businesses that provide employment opportunities for NEIT graduates.

Department chairs and faculty consult with the committees and with individual committee members frequently throughout the year on technical curriculum issues.

Through input from its Technical Advisory Committees, NEIT is able to ensure that its programs, in addition to being academically sound, are educating graduates who meet the needs of industry.

A list of committee membership is available in the Office of Teaching and Learning.

Programs

All students are enrolled in college credit programs. Degrees are awarded after the satisfactory completion of both technical and liberal arts requirements of each program.

An Associate in Science Degree is awarded in:

Advanced Automotive Technology

Advanced Automotive Technology with High Performance

Applied Technical Studies (see program description on p. 11)

Architectural Building Engineering Technology

Automotive Collision Repair Technology

Automotive Technology

Automotive Technology with High Performance

Building Construction Technology

Business Management

Civil Engineering Technology

Clinical Medical Assistant

Criminal Justice

Digital Media Production

Electrical Technology

Electrical Technology with Renewable Energy Systems

Electronic Medical Records

Electronic Systems Engineering Technology

Game Development and Simulation Programming

Graphics, Multimedia and Web Design

Information Technology

    Network Engineering

    Software Engineering

Interior Design

Marine Technology

Mechanical Engineering Technology

Medical Laboratory Technology

Nursing

Occupational Therapy Assistant

Physical Therapist Assistant

Plumbing/Heating/Gas Technology

Refrigeration/Air Conditioning/Heating/Gas Technology

Respiratory Care

Surgical Technology

Veterinary Practice Management

Veterinary Technology

Video Game Design

A Bachelor of Science Degree is awarded in:

Architectural Building Engineering Technology

Automotive Service Management

Business Management

Construction Management

Criminal Justice

Cyber Security

Digital Media Production

Electrical Engineering Technology

Game Development and Simulation Programming

Graphics, Multimedia and Web Design

Information Technology, Networking Engineering

Information Technology, Software Engineering

Interior Design

Mechanical Engineering Technology

RN to BSN

Video Game Design

A Master of Science Degree is awarded in:

Construction Management

Information Technology

Occupational Therapy

Plus-Two Bachelor Degree Division

After two years of study at NEIT, students may continue their preparation for more demanding career opportunities. Plus-Two means that a student's education at NEIT takes place in two, two-year academic segments, each terminating in a degree: the associate degree followed by the bachelor's degree.

The bachelor's degree is an advanced, upper-division program that builds on the foundation of the associate degree. In each program, courses are planned in a coherent sequence that more fully develops the student's understanding of the theoretical basis of the field, while continuing to expand and broaden the student's ability to integrate concepts with their practical application in laboratory experiences. Some bachelor's programs culminate in a senior project, in which the student develops an individual research project appropriate to the particular major.

The senior project requires the student to synthesize all aspects of the bachelor's degree program. The student must not only bring together both theoretical and practical applications of the technical subject but

must also make use of appropriate mathematics and physics. In addition, the student must present the project in both written and oral form, using the communications skills gained in liberal arts courses.

Graduates of any NEIT associate degree program may continue on for a Bachelor of Science Degree in Business Management. In some cases, students may need additional coursework to meet the prerequisites of the bachelor's program.

In the following cases, students can move directly into a bachelor program with minimal or no additional coursework:

Graduates with an NEIT associate degree in:	May take a bachelor's degree in:
Architectural Building Engineering Technology	Architectural Building Engineering Technology Construction Management
Automotive Collision Repair Technology	Automotive Service Management
Automotive Technology and Advanced Automotive Technology	Automotive Service Management
Building Construction Technology	Construction Management
Business Management	Business Management
Civil Engineering Technology	Construction Management
Criminal Justice	Criminal Justice
Digital Media Production	Digital Media Production
Electrical Technology and Electronic Systems Engineering Technology	Electrical Engineering Technology
Game Development and Simulation Programming	Game Development and Simulation Programming
Graphics, Multimedia & Web Design	Graphics, Multimedia & Web Design
Information Technology, Network Engineering	Information Technology, Network Engineering or Cyber Security
Information Technology, Software Engineering	Information Technology, Software Engineering
Interior Design	Interior Design
Marine Technology	Automotive Service Management
Mechanical Engineering Technology	Mechanical Engineering Technology
Nursing	RN to BSN
Video Game Design	Video Game Design
Graduates with an NEIT associate degree in:	**May apply for admission to a master's degree program in:**
Occupational Therapy Assistant	Occupational Therapy
Graduates with an NEIT bachelor's degree in:	**May apply for admission to a master's degree program in:**
Construction Management	Construction Management
Information Technology	Information Technology

A student must earn at least a 2.0 grade point average in the associate division to enroll in NEIT's bachelor division; some programs may have additional requirements. A student must earn at least a 2.5 grade point average in the bachelor's division to apply for admission to a master's program. For additional information, please consult with the Office of Teaching and Learning or the Office of Student Support Services.

Curriculum Requirements and Liberal Arts Core

All programs, both those leading to associate degrees and those leading to bachelor's degrees, must meet certain minimum requirements in both the technical major and in the liberal arts. Individual departments have specific requirements and may require more than the minimum number of credits. A list of all the courses in each program and each core is available in this catalog.

Minimum Requirements for an Associate in Science Degree*/Standard Distribution of Credits

Technical Courses . . . . .60 credits

Mathematics/Science Core . . . . .8 credits

Communications Core . . . . .8 credits

Humanities, Arts/Foreign Language Core . . . . .8 credits

Social Sciences Core . . . . .8 credits

Total Minimum Requirement . . . . .92 credits

Minimum Requirements for a Bachelor of Science Degree*/Standard Distribution of Credits (in addition to associate degree totals)

Technical courses . . . . .60 credits

Mathematics/Science Core . . . . .8 credits

Communications Core . . . . .8 credits

Social Sciences Core . . . . .4 credits

Humanities Core . . . . .4 credits

Social Sciences, Humanities, or
Arts/Foreign Language Core . . . . .4 credits

Total Minimum Requirement . . . . .88 credits

*NOTE: These are minimum requirements; distribution of credits may vary between departments. Consult descriptions of each program for more complete information.

Liberal Arts Core Requirements

Humanities and Social Sciences

All students, at both of the associate and bachelor's level, are required to take a core of communication courses that stress writing, oral communication, and critical thinking. Entering students are tested and placed in either EN 101 or EN 102. EN 102 is a prerequisite for taking upper level courses in English, humanities, and social sciences. Those studying for the bachelor's degree also take EN 331, an advanced course in research writing, and EN 421 Technical Communications.

Additional information about liberal arts requirements can be obtained from the Humanities and Social Sciences Department, from the Office of Teaching and Learning, or from the Office of Student Support Services.

Mathematics and Sciences

The Mathematics and Sciences Department plays a crucial role for all of the technical majors in the College, giving students the background they need to understand their programs.

The mathematics portion of the curriculum includes courses ranging from non-credit developmental courses for those who need to brush up on math skills, to a series of advanced calculus courses. Science courses are offered in biology, chemistry, physics and physical science.

The mathematics and science courses have two principal purposes. The first is to provide students with the mathematical tools required to function successfully in their chosen programs. The mathematics and science courses offered in each program have been chosen for their usefulness and applicability to that particular field.

The second purpose of the mathematics and science courses is to provide students with a progressive, linear thought-processing capability that will help them to work out solutions to problems in situations for which they have not been specifically trained. The study of sciences provides an understanding of the physical and natural laws governing technical applications, while mathematics offers a problem-solving approach to thinking.

Complete details about curriculum requirements in mathematics and science can be found in the descriptions of curriculum requirements.

Starting Dates

Students may register and begin a program of study in the Fall, Winter, Spring, or Summer Quarter, although in most cases, beginning courses in the major in any particular quarter cannot be guaranteed.

Cancellation of Courses

Courses available each quarter are printed on a course schedule. NEIT reserves the right to cancel courses or change the scheduled location of classes as necessary due to insufficient enrollments, classroom availability or other mitigating factors.

Choice of Curriculum

Students are required to state their choice of curriculum on their application for admission. The choice may be changed prior to registration by consulting an admissions officer. After classes have started, changes may be made only by consultation with the student advisor and may require the department chair's approval. A student will receive guidance in the development of a program of study; however, the final responsibility for selecting a student's program of study is with the student.

The following pages list the courses required to complete degree requirements in each of the programs offered at NEIT. The order in which a student takes the required courses may vary from the listed order as long as prerequisites for individual courses are met.

CURRICULUM

Associate in Science Degree

The Associate in Science degree in Architectural Building Engineering Technology is offered through the Department of Design + Architectural Building Technology.

The Architectural Building Engineering Technology Program is based upon the premise that buildings are designed and built using a team concept. As an integral member of that team, the architectural engineer must have the ability to create and construct buildings that will answer the economic, safety, technical, sustainability, and aesthetic requirements of a project. The associate degree program allows students to develop these necessary abilities by emphasizing the fundamentals of architectural design, structural engineering, environmental systems, sustainability, and construction technology. The program is also designed to instill within students a sense of professionalism and a desire to serve and contribute to society.

In the associate degree program, students also develop basic skills in drafting, graphic communications, three-dimensional theory, computer-aided drafting (CAD), construction documents, construction techniques, green technology, and building materials. Upon successful completion of the associate degree program, students can continue into either the NEIT Bachelor of Science in Architectural Building Engineering Technology degree program or the Bachelor of Science in Construction Management degree program.

Architectural Building Engineering Technology
Associate in Science Degree

Quarter I

Course	No.	Course Title	C	L	T
ABT	110	Introduction to Architecture and Building Technology	1	0	1
ABT	112	Technical Drafting and Graphic Communications	2	2	3
ABT	114	Introduction to Computer-Aided Drafting (CAD)	2	4	4
ABT	115	Introduction to Structures	2	0	2
		CHOOSE ONE *(depending upon Math placement)*			
MA	*100/110*	*Introduction to College Math (MA/SCI Core)*	*4*	*0*	*4*
-or-					
ELECTIVE		*Choice of Math/Science, Humanities, Social Sciences, or Arts/Foreign Language Core Elective*			
			11	6	14

Quarter II

Course	No.	Course Title	C	L	T
ABT	122	Two- and Three-Dimensional Design Theory	3	0	3
ABT	124	Construction Methods & Materials	3	0	3
ABT	125	Building Design & Technology I	2	4	4
MA	*125*	*Technical Math I (MA/SCI Core)*	*4*	*0*	*4*
		CHOOSE ONE *(depending upon English placement)*			
EN	*101*	*Introduction to Writing and Workplace Communication (COM Core)*	*4*	*0*	*4*
-or-					
EN	*102*	*Critical Thinking and College Writing (COM Core)*			
			16	4	18

Quarter III

Course	No.	Course Title	C	L	T
ABT	135	Building Design & Technology II	2	8	6
ABT	137	Introduction to Environmental Systems	3	0	3
ABT	138	Surveying & Civil Technology	1	2	2
MA	210	Technical Math II (MA/SCI Core)	4	0	4
		CHOOSE ONE *(depending upon Quarter II)*			
EN	*102*	*Critical Thinking and College Writing (COM Core)*	*4*	*0*	*4*
-or-					
ELECTIVE		*Communications Core*			
			14	10	19

Quarter IV

Course	No.	Course Title	C	L	T
ABT	211	Presentation Techniques	1	2	2
ABT	218	Building Information Modeling I (BIM I)	2	4	4
ABT	236	Building Codes	2	0	2
ID	212	Programming	2	0	2
HI	*235*	*Architectural History (SS Core)*	*4*	*0*	*4*
			11	6	14

Quarter V

Course	No.	Course Title	C	L	T
ABT	221	Visualization Studies I	2	2	3
ABT	225	Building Design & Technology III	4	6	7
MCT	215	Statics	3	2	4
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	*4*	*0*	*4*
			13	10	18

Quarter VI

Course	No.	Course Title	C	L	T
ABT	127	Introduction to Construction Estimating	3	0	3
ABT	235	Building Design & Technology IV	4	6	7
MCT	224	Mechanics of Materials	3	2	4
PHY	*200*	*Physics I & Lab (MA/SCI Core)*	*3*	*2*	*4*
			13	10	18

Total Quarter Credit Hours = 101

Legend

C = Number of lecture hours per week
L = Number of laboratory hours per week
T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one credit depending on the expected amount of pre- or post-lab work.

PLEASE NOTE: All liberal arts core courses are listed in italics.

All associate degree students are required to take 32 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses. Students who place out of EN 101, EN 102 or MA 100/110 must still take 32 credits of core courses.

Bachelor of Science Degree

The Bachelor of Science degree in Architectural Building Engineering Technology is offered through the Department of Design + Architectural Building Technology.

The Architectural Building Engineering Technology Program continues to build upon the premise that buildings are designed and built using a team concept. The bachelor program allows students to build upon the fundamentals learned in the associate degree program and expand their knowledge base of architectural design, engineering, and building science. As in the associate degree, the bachelor program is also designed to instill within students a sense of professionalism and a desire to serve and contribute to society through the solutions of its problems in a way which is technically, environmentally, and socially acceptable.

In the bachelor program, students also study advanced topics in structural engineering using wood, steel, masonry, and concrete, advanced environmental and mechanical systems, sustainability, LEED certification of buildings, site planning, contracts and specifications, and construction law. The program culminates with a Senior Thesis course. In this final term, students must demonstrate their understanding of and ability to utilize and synthesize the technical and engineering concepts they developed throughout their New England Tech experience.

Students who wish to pursue professional registration may take advantage of our agreement with Boston Architectural Center (BAC) or pursue graduate studies at other institutions in the United States. Other students may pursue careers in associated fields within the design and building industry.

Architectural Building Engineering Technology
Bachelor of Science Degree

Quarter VII

Course	No.	Course Title	C	L	T
ABT	314	Construction Contracts & Specifications	3	0	3
ABT	315	Structural Wood Design	2	4	4
ABT	324	Masonry Construction & Detailing	2	2	3
PHY	*300*	*Physics II & Lab (MA/SCI Core)*	*3*	*2*	*4*
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	*4*	*0*	*4*
			14	8	18

Quarter VIII

Course	No.	Course Title	C	L	T
ABT	325	Soil Mechanics & Foundation Design	3	0	3
ABT	328	Structural Steel Design	2	4	4
ABT	337	Building Information Modeling II (BIM II)	2	4	4
EN	*331*	*Research Writing (COM Core)*	*4*	*0*	*4*
			11	8	15

Quarter IX

Course	No.	Course Title	C	L	T
ABT	330	Visualization Studies II	2	4	4
ABT	331	Advanced Environmental Systems	3	0	3
ABT	334	Site Engineering & Planning	2	2	3
ABT	338	Reinforced Concrete Design	4	0	4
MA	*310*	*Calculus I (MA/SCI Core)*	*4*	*0*	*4*
			15	6	18

Quarter X

Course	No.	Course Title	C	L	T
ABT	410	Building Design & Technology V (Low Rise)	4	6	7
ABT	412	Sustainability in Construction	3	0	3
ABT	414	Current Topics I	3	0	3
EN	*421*	*Technical Communications (COM Core)*	*4*	*0*	*4*
			14	6	17

Quarter XI

Course	No.	Course Title	C	L	T
ABT	420	Building Design & Technology VI (High Rise)	4	6	7
ABT	421	Acoustics & Lighting	3	0	3
ABT	423	Senior Thesis Proposal	1	0	1
ABT	424	Current Topics II	3	0	3
ELECTIVE		*Humanities, Social Sciences, or Arts/Foreign Language Core*	*4*	*0*	*4*
			15	6	18

Quarter XII

Course	No.	Course Title	C	L	T
ABT	430	Senior Thesis	2	6	5
MGM	340	Engineering Finance	2	2	3
ABT	433	Construction Law	3	0	3
ELECTIVE		*Social Sciences Core*	*4*	*0*	*4*
			11	8	15

Total Quarter Credit Hours = 101

Legend

C = Number of lecture hours per week

L = Number of laboratory hours per week

T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one credit depending on the expected amount of pre- or post-lab work.

PLEASE NOTE: All liberal arts core courses are listed in italics.

All bachelor degree students are required to take 28 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses.

Associate in Science Degree

The associate in science degree program in Automotive Collision Repair Technology offers an in-depth study of all aspects of auto body technology, collision repair, and refinishing. Students are provided theory and practice in sheet metal repair and replacement, repair of body damage, frames and unibody, glass installation, and paint refinishing techniques.

Students also learn the aspects of automotive technology (such as brakes, suspension, heating, and air conditioning) which are most useful for a thorough understanding of auto body and collision repair.

Graduates are ready to enter a range of technician positions in the auto body field. In addition, after completing some prerequisites, they are eligible to continue on for a Bachelor of Science in Automotive Service Management (referred to below as ASM) or in Business Management.

CERTIFICATION STATUS

NEIT's Automotive Collision Repair Technology program is Master-Certified by the National Automotive Technician's Education Foundation (NATEF), 101 Blue Seal Drive, Suite 101, Leesburg, Virginia 20175, telephone: (703) 669-6650.

Quarter I

Course	No.	Course Title	C	L	T
TT	105	Introduction to Transportation Technology	2	0	2
AUB	101	Fundamentals of Auto Body Metal Repair	3	0	3
AUB	103	Fundamentals of Auto Body Metal Repair Lab	0	4	1
AUB	118	Welding for Collision Repair	0	3	1
AUB	137	Fundamentals of Paints & Refinishing Equipment	2	0	2
AUB	136	Fundamentals of Paints & Refinishing Equipment Lab	0	4	1
		CHOOSE ONE *(depending upon Math placement)*			
MA	*100/110*	*Introduction to College Math (MA/SCI Core)*	*4*	*0*	*4*
-or-					
MA	*200*	*Applied Math for Business (MA/SCI Core)*			
			11	11	14

Quarter II

Course	No.	Course Title	C	L	T
AUB	145	Glass and Non-Structural Panel Replacement	3	0	3
AUB	146	Glass and Non-Structural Panel Replacement Lab	0	3	1
AUB	152	Introduction to Structural Repairs & Component Replacement	4	0	4
AUB	153	Introduction to Structural Repairs & Component Replacement Lab	0	8	2
		CHOOSE ONE *(depending upon English placement)*			
EN	*101*	*Introduction to Writing and Workplace Communication (COM Core)*	*4*	*0*	*4*
-or-					
EN	*102*	*Critical Thinking and College Writing (COM Core)*			
			11	11	14

Automotive Collision Repair Technology
Associate in Science Degree

Quarter III

Course	No.	Course Title	C	L	T
AUB	154	Major & Minor Frame & Structural Straightening	4	0	4
AUB	155	Major & Minor Frame & Structural Straightening Lab	0	8	2
AUB	156	Plastic Panel & SMC Repair	3	0	3
AUB	157	Plastic Panel & SMC Repair Lab	0	3	1
EN	*102*	*Critical Thinking and College Writing (COM Core)*	*4*	*0*	*4*
-or-					
ELECTIVE		*Communications Core*			
			11	11	14

Intersession (Required for Students Planning to Continue into the ASM Program*)

Course	No.	Course Title	C	L	T
ELECTIVE		*Social Sciences Core*	*4*	*0*	*4*
MA	*121*	*Business Math (MA/SCI Core)*	*4*	*0*	*4*
			8	0	8

Quarter IV

Course	No.	Course Title	C	L	T
AUB	243	Multi-Stage Paint Applications	4	0	4
AUB	245	Multi-Stage Paint Applications Lab	0	4	1
AUB	253	Paint and Refinishing Applications	4	0	4
AUB	254	Paint and Refinishing Applications Lab	0	4	1
AUB	261	Assessing Damage & Estimating Repairs	3	0	3
ELECTIVE		*Social Sciences Core (Non-ASM Students)*	*4*	*0*	*4*
-or-					
NE	*115*	*Computer Concepts (ASM* Students)*	*2*	*2*	*3*
			13/15	8/10	16/17

Quarter V

Course	No.	Course Title	C	L	T
AUB	122	Brakes & Suspension Systems for Collision Students	4	0	4
AUB	123	Brakes & Suspension Systems for Collision Students Lab	0	4	1
AUB	127	Introduction to Airbrushing	1	3	2
AUB	128	Custom Modifications I	2	4	3
PHY	*126*	*Applied Physics & Lab (MA/SCI Core)*	*3*	*2*	*4*
ELECTIVE		*Humanities (or Arts/Foreign Language) Core (Non-ASM Students)*	*4*	*0*	*4*
-or-					
MGM	*130*	*Accounting Fundamentals (ASM* Students)*	*3*	*2*	*4*
			13/14	13/15	18

Quarter VI

Course	No.	Course Title	C	L	T
AUB	129	Advanced Airbrushing Techniques	1	3	2
AUB	130	Custom Modifications II	2	4	3
AUB	131	Basic Electricity for the Collision Trade	3	0	3
AUB	132	Basic Electricity for the Collision Trade Lab	0	3	1
AUT	275	Automotive Heating & Air Conditioning Systems	1	3	2
ELECTIVE		*Humanities Core*	*4*	*0*	*4*
BU	*236*	*Small Business and the Law (SS Core)*	*4*	*0*	*4*
		CHOOSE ONE			
AUT	251	Internship/Practical Experience	0	20	4
-or-					
AUB	265	Custom Air Brush Art	2	2	3
			15/17	15/33	22/23

Total Quarter Credit Hours = 99/100 for ACR students
Total Quarter Credit Hours = 106/107 for ASM* students

Legend

C = Number of lecture hours per week
L = Number of laboratory hours per week
T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one credit depending on the expected amount of pre- or post-lab work.

PLEASE NOTE: All liberal arts core courses are listed in italics.

All associate degree students are required to take 32 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses. Students who place out of EN 101, EN 102 or MA 100/110 must still take 32 credits of core courses.

*For students intending to enroll in the bachelor's program in Automotive Service Management upon completion of the associate degree program.

Associate in Science Degree

The Automotive Technology Department provides in-depth study and application of the most current trends in the automotive field.

The department offers four automotive associate degree programs: Automotive Technology and Advanced Automotive Technology, Automotive Technology with High Performance and Advanced Automotive Technology with High Performance. While all programs cover the same topics, the Advanced Automotive Technology degrees include more in-depth study.

Students learn the design, theory of operation, and servicing techniques of the many systems and system components of today's automobiles. Training in engine construction and design, engine repair, electricity, electronics, suspension, steering, brakes, transmissions, fuel systems, ignition systems, and emission controls is provided to assure maximum coverage. Advanced training in air conditioning, drive trains, and transaxles is offered as well. A final engine performance class covers computerized engine controls, fuel injection systems, tailpipe emissions diagnosis, and ABS braking systems. NEIT uses the latest industry standards, up-to-date diagnostic equipment, and Automotive Service Excellence approved curriculum in its training program.

The High Performance degree programs offer an additional quarter of study in high performance vehicle modification and testing.

New England Institute of Technology participates in the Ford Maintenance and Light Repair (MLR) program which includes Ford Service Technician Specialty Training (STST) in the following areas: Electrical Systems, Climate Control, Brake Systems, Steering & Suspension, Tire, Chassis & Maintenance. Upon graduation, students will have completed the necessary requirements for the Ford MLR certification.

These intensive programs prepare students for entry-to-industry-level technical capability and offer skills needed for rapid advancement. After completing some prerequisites, graduates of this program are eligible to continue on for a Bachelor of Science Degree in Automotive Service Management or in Business Management.

CERTIFICATION STATUS

NEIT's Automotive Technology program is Master-Certified by the National Automotive Technician's Education Foundation (NATEF), 101 Blue Seal Drive, Suite 101, Leesburg, Virginia 20175, (703) 669-6650.

Automotive Technology
Associate in Science Degree

Quarter I

Course	No.	Course Title	C	L	T
TT	105	Introduction to Transportation Technology	2	0	2
ATX	115	Automotive Engines	7	0	7
ATX	117	Automotive Engines Lab	0	6	2
		CHOOSE ONE (depending upon Math placement)			
MA	*100/110*	*Introduction to College Math (MA/SCI Core)*	*4*	*0*	*4*
-or-					
MA	*200*	*Applied Math for Business (MA/SCI Core)*			
			13	6	15

Quarter II

Course	No.	Course Title	C	L	T
ATX	125	Automotive Electricity and Electronics	7	0	7
ATX	127	Automotive Electricity and Electronics Lab	0	6	2
AUT	114	Oxy and Electric Welding and Cutting	0	3	1
		CHOOSE ONE *(depending upon English placement)*			
EN	*101*	*Introduction to Writing and Workplace Communication (COM Core)*	*4*	*0*	*4*
-or-					
EN	*102*	*Critical Thinking and College Writing (COM Core)*			
			11	9	14

Quarter III

Course	No.	Course Title	C	L	T
ATX	135	Automotive Brakes, Suspension and Steering	7	0	7
ATX	137	Automotive Brakes, Suspension and Steering Lab	0	6	2
PHY	126	Applied Physics & Lab (MA/SCI Core)	3	2	4
		CHOOSE ONE (depending upon Quarter I)			
EN	*102*	*Critical Thinking and College Writing (COM Core)*	*4*	*0*	*4*
-or-					
ELECTIVE		*Communications Core*			
			14	8	17

Intersession

Course	No.	Course Title	C	L	T
BU	*236*	*Small Business and the Law (SS Core)*	*4*	*0*	*4*

Quarter IV

Course	No.	Course Title	C	L	T
ATX	222	Automotive Heating and Air Conditioning Systems	0	3	1
ATX	225	Automotive Fuel and Ignition Systems	7	0	7
ATX	227	Automotive Fuel and Ignition Systems Lab	0	6	2
ELECTIVE		*Humanities (or Arts/Foreign Language) Core (AS students)*	*4*	*0*	*4*
MA	*200*	*Applied Math for Business (MA/SCI Core) (ASM* Students – depending upon Math placement)*	*4*	*0*	*4*
-or-					
MA	*125*	*Technical Math I (MA/SCI Core) (ASM* Students)*			
			11	9	14

Quarter V

Course	No.	Course Title	C	L	T
ATX	235	Automotive Engine Performance Diagnosis	7	0	7
ATX	237	Automotive Engine Performance Diagnosis Lab	0	6	2
AUT	262	Introduction to Hybrid Vehicles	1	3	2
-or-					
AUT	276	Light Duty Diesel Diagnostics and Repair	1	3	2
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	*4*	*0*	*4*
			13	9	15

Quarter VI

Course	No.	Course Title	C	L	T
AUT	215	Automotive Powertrains	6	0	6
AUT	219	Automotive Powertrains Lab	0	8	2
AUT	220	Advanced Powertrains	1	3	2
ELECTIVE		*Social Sciences Core*	*4*	*0*	*4*
			11	11	14

AUTOMOTIVE TECHNOLOGY WITH HIGH PERFORMANCE

One Additional Quarter

Course	No.	Course Title	C	L	T
AUT	271	Introduction to High Performance Vehicles	6	0	6
AUT	272	Introduction to High Performance Vehicles Lab	0	8	4
			6	8	10

Total Quarter Credit Hours = 103

Legend

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Students learn the design, theory of operation, and servicing techniques of the many systems and system components of today's automobiles. Training in engine construction and design, engine repair, electricity, electronics, suspension, steering, brakes, transmissions, fuel systems, ignition systems, and emission controls is provided to assure maximum coverage. Advanced training in air conditioning, drive trains, and transaxles is offered as well. A final engine performance class covers computerized engine controls, fuel injection systems, tailpipe emissions diagnosis, and ABS braking systems. NEIT uses the latest industry standards, up-to-date diagnostic equipment, and Automotive Service Excellence approved curriculum in its training program.

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These intensive programs prepare students for entry-to-industry-level technical capability and offer skills needed for rapid advancement. After completing some prerequisites, graduates of this program are eligible to continue on for a Bachelor of Science Degree in Automotive Service Management or in Business Management.

CERTIFICATION STATUS

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Quarter I

Course	No.	Course Title	C	L	T
TT	105	Introduction to Transportation Technology	2	0	2
AUT	103	Automotive Engines	7	0	7
AUT	104	Automotive Engines Lab	0	8	2
		CHOOSE ONE *(depending upon Math placement)*			
MA	100/110	Introduction to College Math (MA/SCI Core)	4	0	4
-or-					
MA	200	Applied Math for Business (MA/SCI Core) (ASM* Students)			
			13	8	15

Quarter II

Course	No.	Course Title	C	L	T
AUT	105	Automotive Electricity and Electronics	7	0	7
AUT	106	Automotive Electricity and Electronics Lab	0	8	2
AUT	114	Oxy and Electric Welding and Cutting	0	3	1
PHY	126	Applied Physics & Lab (MA/SCI Core)	3	2	4
		CHOOSE ONE *(depending upon English placement)*			
EN	101	Introduction to Writing and Workplace Communication (COM Core)	4	0	4
-or-					
EN	102	Critical Thinking and College Writing (COM Core)			
			14	13	18

Advanced Automotive Technology
Associate in Science Degree

Quarter III

Course	No.	Course Title	C	L	T
AUT	107	Automotive Brakes, Suspension and Steering	8	0	8
AUT	108	Automotive Brakes, Suspension and Steering Lab	0	8	2
BU	236	Small Business and the Law (SS Core)	4	0	4
		CHOOSE ONE *(depending upon Quarter I)*			
EN	*102*	*Critical Thinking and College Writing (COM Core)*	*4*	*0*	*4*
-or-					
ELECTIVE		*Communications Core*			
			16	8	18

Quarter IV

Course	No.	Course Title	C	L	T
AUT	209	Automotive Fuel and Ignition Systems	8	0	8
AUT	210	Automotive Fuel and Ignition Systems Lab	0	12	4
		CHOOSE ONE			
MA	*200*	*Applied Math for Business (MA/SCI Core) (ASM* Students)*	*4*	*0*	*4*
-or-					
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*			
			12	12	16

Quarter V or VI

Course	No.	Course Title	C	L	T
AUT	221	Automotive Engine Performance Diagnosis	8	0	8
AUT	222	Automotive Engine Performance Diagnosis Lab	0	12	4
		CHOOSE ONE			
ELECTIVE		*Social Sciences Core*	*4*	*0*	*4*
-or-					
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*			
		Automotive Electives (Choose One):			
AUT	220	Advanced Powertrains	1	3	2
AUT	251	Internship/Practical Experience (Can be taken in final quarter only.)	0	20	4
AUT	261	Introduction to Natural Gas Vehicles	0	3	1
AUT	262	Introduction to Hybrid Vehicles	1	3	2
AUT	263	NVH Principles and Diagnostics	1	3	2
AUT	276	Light Duty Diesel Diagnostics and Repair	1	3	2
AUT	277	Vehicle Service Practices with Career Preparation	1	3	2
AUT	280	Advanced Troubleshooting	1	3	2
AUB	136/137	Fundamentals of Paints & Refinishing Equipment	2	4	3
MGM	130	Accounting Fundamentals (ASM* Students)	3	2	4
AUB	265	Custom Air Brush Art	2	2	3
MT	215	Fuel Systems Theory and Introduction to EFI Applications	4	4	5
MT	217	Diesel Engine Service and Maintenance	2	6	4
MT	261	Fiberglass Fabrication and Repair	2	2	3
			12-16	14-32	17-21

Quarter VI or V

Course	No.	Course Title	C	L	T
AUT	215	Automotive Powertrains	6	0	6
AUT	219	Automotive Powertrains Lab	0	8	2
AUT	275	Automotive Heating and Air Conditioning Systems	1	3	2
ELECTIVE		*Social Sciences Core*	*4*	*0*	*4*
		Automotive Electives (Choose One):			
AUT	220	Advanced Powertrains	1	3	2
AUT	251	Internship/Practical Experience (Can be taken in final quarter only.)	0	20	4
AUT	261	Introduction to Natural Gas Vehicles	0	3	1
AUT	262	Introduction to Hybrid Vehicles	1	3	2
AUT	263	NVH Principles and Diagnostics	1	3	2
AUT	276	Light Duty Diesel Diagnostics and Repair	1	3	2
AUT	277	Vehicle Service Practices with Career Preparation	1	3	2
AUT	280	Advanced Troubleshooting	1	3	2
AUB	136/137	Fundamentals of Paints & Refinishing Equipment	2	4	3
AUB	265	Custom Air Brush Art	2	2	3
NE	115	Computer and Networking Fundamentals (ASM Students)	2	2	3
MT	215	Fuel Systems Theory and Introduction to EFI Applications	4	4	5
MT	217	Diesel Engine Service and Maintenance	2	6	4
MT	261	Fiberglass Fabrication and Repair	2	2	3
			11-15	13-31	15-19

ADVANCED AUTOMOTIVE TECHNOLOGY WITH HIGH PERFORMANCE

One Additional Quarter

Course	No.	Course Title	C	L	T
AUT	271	Introduction to High Performance Vehicles	6	0	6
AUT	272	Introduction to High Performance Vehicles Lab	0	8	4
			6	8	10

Total Quarter Credit Hours = 109-117 AAHP Students
Total Quarter Credit Hours = 115 for ASM* Students

Legend

C = Number of lecture hours per week
L = Number of laboratory hours per week
T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one credit depending on the expected amount of pre- or post-lab work.

PLEASE NOTE: All liberal arts core courses are listed in italics.

All associate degree students are required to take 32 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses. Students who place out of EN 101, EN 102 or MA 100/110 must still take 32 credits of core courses.

*For students intending to enroll in the bachelor's program in Automotive Service Management upon completion of the associate degree program.

Bachelor of Science Degree

The Bachelor of Science in Automotive Service Management is designed to provide students with a broad range of management, business, and technical skills applicable to employment in the transportation industries. The program provides education and training in management, accounting and cash flow, human resources and personnel supervision, financial planning, inventory controls, warranty management, sales promotions, software applications, and industry-specific topics. Through various teaching methodologies, students will be exposed to theory and application of customer service skills, management of employees, and system controls. Graduates of this BS program will be prepared to seek entry-level to mid-level positions such as general service manager, sales manager, human resource manager, service writer, parts manager, warranty administrator, fleet manager, collision repair production manager, and marina and boatyard manager.

Automotive Service Management
Bachelor of Science Degree

Quarter VII

Course	No.	Course Title	C	L	T
AUT	300	Industry Software Applications I	2	2	3
AUT	305	Sales and Customer Relations	4	0	4
IT	375	Information Systems Management	3	2	4
EN	*331*	*Research Writing (COM Core)*	*4*	*0*	*4*
			13	4	15

Quarter VIII

Course	No.	Course Title	C	L	T
AUT	302	Service Management Operations	3	2	4
AUT	306	Environmental Health and Safety	3	0	3
MGM	314	Principles of Marketing	1	4	3
EN	*421*	*Technical Communications (COM Core)*	*4*	*0*	*4*
			11	6	14

Quarter IX

Course	No.	Course Title	C	L	T
MGM	160	Business Accounting & Financial Reporting	2	2	3
MGM	311	Data Analysis and Reporting	1	4	3
MGM	415	Career Advancement & Success	2	2	2
AUT	304	Industry Software Applications II	3	2	4
MA	*300*	*Statistics (MA/SCI Core)*	*4*	*0*	*4*
			12	10	16

Quarter X

Course	No.	Course Title	C	L	T
MGM	330	Managerial Accounting	2	2	3
MGM	335	Human Resource Management	2	2	3
AUT	401	Warranty Administration	3	0	3
ELECTIVE		*Humanities Core*	*4*	*0*	*4*
			11	4	13

Quarter XI

Course	No.	Course Title	C	L	T
AUT	402	Inventory Management	2	2	3
AUT	403	Introduction to Senior Internship	2	0	2
MGM	430	Financial Management	3	2	4
ELECTIVE		*Math/Science Core*	*4*	*0*	*4*
ELECTIVE		*Social Sciences Core*	*4*	*0*	*4*
			15	4	17

Quarter XII

Course	No.	Course Title	C	L	T
AUT	404	Legal Issues and the Dealership	3	0	3
AUT	405	ASE Test Preparation	2	0	2
ELECTIVE		*Humanities, Social Sciences, or Arts/Foreign Language Core*	*4*	*0*	*4*
		CHOOSE ONE			
AUT	410	Senior Internship	1	20	5
-or-					
MGM	495	Strategic Management & Decision Making	2	2	3
-and-					
MGM	496	Professional Portfolio	1	0	1
			10-12	2/20	13/14

Total Quarter Credit Hours = 88/89

Legend

C = Number of lecture hours per week

L = Number of laboratory hours per week

T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one credit depending on the expected amount of pre- or post-lab work.

PLEASE NOTE: All liberal arts core courses are listed in italics.

All bachelor degree students are required to take 28 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses.

Introduction to Information Technology (IT 111), Small Business and the Law (BU 236), Accounting Fundamentals (MGM 130), and Applied Math for Business (MA 200) or their equivalents need to be taken either during the Associate Degree Program, while matriculating in Automotive Service Management, or during a prerequisite quarter.

Associate in Science Degree

The associate in science degree program in Building Construction Technology has two tracks: Building Construction and Cabinetmaking and Building Construction and Design, and is designed to cover topics in the residential, commercial building, cabinetmaking, and design trades. It also focuses on the role of computers in the estimating, design, and manufacturing components of the industry.

Construction topics include site work and framing procedures for floors, walls, rafters, dormers, and stair systems. Interior installation treatments include drywall installation, taping, and spackling; finished openings, casing, baseboard and molding. The applicable building codes are viewed extensively. Methods of sizing all components are stressed, as are the design considerations mandated by the code. Students who successfully complete the OSHA class receive an OSHA10 card. Students who successfully complete the Lead Abatement class are eligible to sit for the Rhode Island lead abatement exam.

The construction and cabinetmaking components of the program include manual and computer-assisted drafting (CAD), print reading, and manual and computer-aided estimating. The use of computers is emphasized to make students better prepared for these fast-paced industries.

Internships are available as options in the curriculum. It is the responsibility of the student to secure the internship site.

BUILDING CONSTRUCTION AND CABINETMAKING (BCM)

The cabinetmaking component includes the study of machinery and tools, wood as a material, cabinetmaking joints and assembly. Cabinets are built and completed in the lab. The cabinetmaking portion also includes the set-up, programming, and operation of a Computerized Numerical Control (CNC) router. After completing some prerequisites*, graduates of this program are eligible to continue on for a Bachelor of Science Degree in Business Management.

BUILDING CONSTRUCTION AND DESIGN (BCD)

 The design program combines elements of Building Construction and Architectural Engineering. Graduates of the Building Construction and Design curriculum are eligible to enter the Bachelor of Science Degree program in Construction Management (CMT).

CORE CURRICULUM

Quarter I

Course	No.	Course Title	C	L	T
CR	114	Technical Fundamentals of Building Construction	5	0	5
CR	116	Tool and Site Work Lab	0	8	2
CR	117	Introduction to Blueprint Reading	2	0	2
MGM	102	Word Processing (5 week course)	.5	1	1
		CHOOSE ONE *(depending upon English placement)*			
EN	*101*	*Introduction to Writing and Workplace Communication (COM Core)*	*4*	*0*	*4*
-or-					
EN	*102*	*Critical Thinking and College Writing (COM Core)*			
			11.5	9	14

Quarter II

Course	No.	Course Title	C	L	T
CR	122	House Framing I	5	0	5
CR	121	House Framing I Lab	0	6	2
CR	124	Construction Safety Practices and OSHA	1	0	1
CR	126	Introduction to Building Codes	2	0	2
		CHOOSE ONE *(depending upon Math placement)*			
MA	*100/110*	*Introduction to College Math (MA/SCI Core)*	*4*	*0*	*4*
-or-					
ELECTIVE		*Math/Science Core*			
		CHOOSE ONE *(depending upon Quarter I)*			
EN	*102*	*Critical Thinking and College Writing (COM Core)*	*4*	*0*	*4*
-or-					
ELECTIVE		*Communications Core*			
			16	6	18

BUILDING CONSTRUCTION AND CABINETMAKING CONCENTRATION (BCM)

Quarter III

Course	No.	Course Title	C	L	T
CR	209	Introduction to CAD for Construction	4	0	4
BU	*236*	*Small Business and the Law (SS Core)*	*4*	*0*	*4*
		CHOOSE ONE			
MA	*121*	*Business Math (MA/SCI Core) (For BCM)*	*4*	*0*	*4*
-or-					
MA	*125*	*Technical Math I (MA/SCI Core) (CMT/BS)*			
		CHOOSE ONE SET			
CR	131	House Framing II	4	0	4
CR	132	House Framing II Lab	0	6	2
-or-					
CR	222	Introduction to Computerized Numerical Control (CNC) Programming	3	0	3
CR	223	Introduction to Computerized Numerical Control (CNC) Lab	0	2	1
CR	236	Introduction to Finishing and Spraying	2	3	3
			16/17	5/6	18/19

Building Construction Technology
Associate in Science Degree

Quarter IV

Course	No.	Course Title	C	L	T
CR	136	Introduction to Computer Estimating	3	0	3
CR	212	Cabinetmaking I	4	0	4
CR	211	Cabinetmaking I Lab	0	6	2
CR	217	Professional Seminar	1	0	1
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	*4*	*0*	*4*
			12	6	14

Quarter V

Course	No.	Course Title	C	L	T
CR	230	Cabinetmaking II	4	0	4
CR	231	Cabinetmaking II Lab	0	8	4
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	*4*	*0*	*4*
		CHOOSE ONE			
CR	250	Internship I	0	15	3
		-or-			
CR	210	Lead-Safe Remodeler/Renovator Training	2	0	2
			8/10	8/23	14/15

Quarter VI

Course	No.	Course Title	C	L	T
ELECTIVE		*Social Sciences Core*	*4*	*0*	*4*
		Choose a Tech Group and a "Choose One"			
		Group One			
CR	226	Sustainable Design and Construction Methods	3	0	3
ABT	138	Surveying & Civil Technology	1	2	2
CR	242	Kitchen and Bath Design and Installation	2	0	2
CR	243	Kitchen and Bath Design and Installation	0	3	1
		Group Two			
CR	236	Introduction to Finishing and Spraying	2	3	3
CR	237	Cabinetmaking III	4	0	4
CR	238	Cabinetmaking III Lab	0	8	2
		CHOOSE ONE**			
ABT	137	Introduction to Environmental Systems	3	0	3
		-or-			
CR	254	Internship II	0	15	3
			10/13	5-26	15/16

Total Quarter Credit Hours = 93-96

BUILDING CONSTRUCTION AND DESIGN CONCENTRATION (BCD)

Quarter III

Course	No.	Course Title	C	L	T
CR	131	House Framing II	4	0	4
CR	132	House Framing II Lab	0	6	2
CR	209	Introduction to CAD for Construction	4	0	4
ELECTIVE		*Social Sciences Core*	*4*	*0*	*4*
MA	*125*	*Technical Math I (MA/SCI Core)*	*4*	*0*	*4*
			16	6	18

Quarter IV

Course	No.	Course Title	C	L	T
CR	136	Introduction to Computer Estimating	3	0	3
CR	217	Professional Seminar	1	0	1

CR	226	Sustainable Design and Construction Methods	3	0	3
CR	242	Kitchen and Bath Design and Installation	2	0	2
CR	243	Kitchen and Bath Design and Installation Lab	0	3	1
MA	*210*	*Technical Math II (MA/SCI Core)*	*4*	*0*	*4*
			13	3	14

Quarter V

Course	No.	Course Title	C	L	T
ABT	138	Surveying & Civil Technology	1	2	2
CR	210	Lead-Safe Remodeler/Renovator Training	2	0	2
MCT	215	Statics	3	2	4
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	*4*	*0*	*4*
		CHOOSE ONE			
ABT	124	Construction Methods and Materials	3	0	3
		-or-			
CR	250	Internship I	0	15	3
			10/13	4/19	15

Quarter VI

Course	No.	Course Title	C	L	T
ABT	137	Introduction to Environmental Systems	3	0	3
MCT	224	Mechanics of Materials	3	2	4
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	*4*	*0*	*4*
		CHOOSE ONE			
CR	254	Internship II	0	15	3
		-or-			
ABT	112	Technical Drafting & Graphic Communications	2	2	3
			10/12	4/17	14

Total Quarter Credit Hours = 93

Legend

C = Number of lecture hours per week

L = Number of laboratory hours per week

T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one credit depending on the expected amount of pre- or post-lab work.

PLEASE NOTE: All liberal arts core courses are listed in italics.

All associate degree students are required to take 32 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses. Students who place out of EN 101, EN 102 or MA 100/110 must still take 32 credits of core courses.

**Only choose courses that you have NOT taken before.

*Students considering a Bachelor of Science Degree in Business Management need to take Effective Teams and Projects (MGM 105), Accounting Fundamentals (MGM 130), Introduction to Business Analysis and Reporting (MGM 131), Small Business and the Law (BU 236), and Applied Math for Business (MA 200) or Technical Math I (MA 125) or their equivalents either during their associate degree program or during a prerequisite quarter. See your student advisor to schedule these courses.

Associate in Science Degree

The Business Management Department offers two academic programs: an Associate in Science in Business Management (MGT AS) and a Bachelor of Science in Business Management (MGT BS). The associate degree curriculum includes management, accounting, finance, and marketing current practices, Microsoft Office Suite and related software, and interpersonal skills essential for initial employment in business. The bachelor's degree curriculum builds on the

education that the associate degree program provides, preparing students for advancement in responsibilities and position and a career in management.

Both the AS and BS programs in Business Management emphasize a blend of technical, people/interpersonal, and analytical knowledge and skills, practice in labs what students will be doing in the typical workplace, integrate material across courses and functional areas of business, and develop the approach of being a life-long learner, in particular in the areas of technology and management. AS Business Management courses, reflecting today's workplace, combine primarily face-to-face with online learning experiences.

Students in MGT AS learn the basics of management, accounting, finance, marketing, and interpersonal relationship principles that are then applied in laboratory exercises, simulations, and cases. Hands-on training is provided for management skills, such as analyzing accounting information, effective teamwork, or making presentations, as well as for Office Suite software including spreadsheets, databases, presentation and publishing software, and word processing. Students also become familiar with web navigation and use. Communication skills, including writing and speaking, are refined; students review the basics of English grammar, business-letter writing and editing, and proofreading. Additionally, students practice their verbal skills by making various presentations and preparing for employment interviews.

Graduates of the MGT AS program may be qualified to work in many industries in a variety of positions such as customer, sales, or service associate/representative, operations supervisor, business analyst, accounting, receivable or payables clerk/analyst, executive assistant, office assistant/manager, and management trainee. In addition, after completing certain prerequisites, graduates of this program are eligible to continue on for a Bachelor of Science Degree in Business Management.
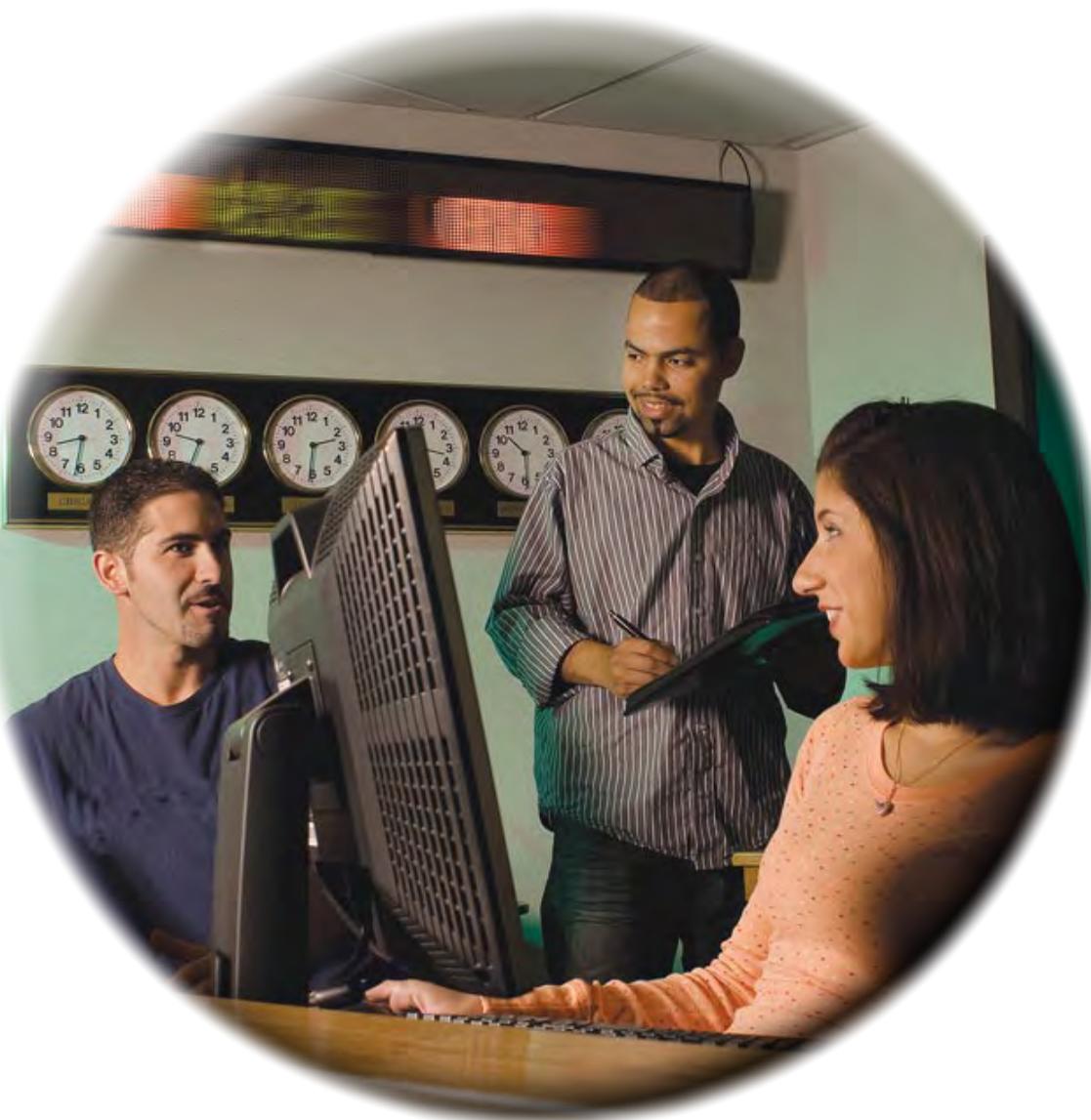
Business Management
Associate in Science Degree

Quarter I

Course	No.	Course Title	C	L	T
MGM	105	Effective Teams and Projects	2	2	3
MGM	107	Introduction to Business	2	2	3
MGM	111	Workplace Technology	2	2	3
		CHOOSE ONE *(depending upon Math placement)*			
MA	*100/110*	*Introduction to College Math (MA/SCI Core)*	*4*	*0*	*4*
-or-					
MA	*121*	*Business Math (MA/SCI Core)*			
-or-					
MA	*125*	*Technical Math I (MA/SCI Core) (BS* Students)*			
		CHOOSE ONE *(depending upon English placement)*			
EN	*101*	*Introduction to Writing and Workplace Communication (COM Core)*	*4*	*0*	*4*
-or-					
EN	*102*	*Critical Thinking and College Writing (COM Core)*			
			14	6	17

Quarter II

Course	No.	Course Title	C	L	T
MGM	125	Principles of Management	2	2	3
MGM	131	Introduction to Business Analysis and Reporting	1	4	3
MGM	143	Business Communication	1	4	3
		CHOOSE ONE *(depending upon Quarter I)*			
MA	*121*	*Business Math (MA/SCI Core)*	*4*	*0*	*4*
-or-					
MA	*125*	*Technical Math I (MA/SCI Core) (BS* Students)*			
-or-					
MA	*200*	*Applied Math for Business (MA/SCI Core) (BS* Students)*			
		CHOOSE ONE *(depending upon Quarter I)*			
EN	*102*	*Critical Thinking and College Writing (COM Core)*	*4*	*0*	*4*
-or-					
ELECTIVE		*Communications Core*			
			12	10	17

Quarter III

Course	No.	Course Title	C	L	T
MGM	130	Accounting Fundamentals	3	2	4
MGM	153	Workplace Relationships and Communication	2	2	3
MGM	157	Global Business	2	2	3
MGM	198	Management Practice Lab I	1	4	3
EC	*203*	*Principles of Economics (SS Core)*	*4*	*0*	*4*
			12	10	17

Quarter IV

Course	No.	Course Title	C	L	T
MGM	160	Business Accounting and Financial Reporting	2	2	3
MGM	211	Business Publishing	2	2	3
MGM	214	Marketing Communications	2	2	3
MGM	215	Career Exploration & Planning	2	2	3
BU	*236*	*Small Business and the Law (SS Core)*	*4*	*0*	*4*
			12	8	16

Quarter V

Course	No.	Course Title	C	L	T
MGM	225	Leading Teams and Projects	2	2	3
MGM	230	Financial Literacy and Decision Making	1	4	3
MGM	231	Databases & Data Analysis	1	4	3
ELECTIVE		Management Elective 1	2	2	3
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	*4*	*0*	*4*
			10	12	16

Quarter VI

Course	No.	Course Title	C	L	T
MGM	260	Foundations of Organizational Financial Analysis	2	2	3
MGM	264	Sales and Service Management	2	2	3
MGM	298	Management Practice Lab II	1	4	3
ELECTIVE		Management Elective 2	2	2	3
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	*4*	*0*	*4*
			11	10	16

Total Quarter Credit Hours = 99

Legend

C = Number of lecture hours per week
L = Number of laboratory hours per week
T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one credit depending on the expected amount of pre- or post-lab work.

PLEASE NOTE: All liberal arts core courses are listed in italics.

All associate degree students are required to take 32 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses. Students who place out of EN 101, EN 102 or MA 100/110 must still take 32 credits of core courses.

*For students intending to enroll in the bachelor's program in Business Management upon completion of the associate degree program.

Bachelor of Science Degree

The Bachelor of Science Degree in Business Management (MGT BS) program builds on the knowledge and skills acquired in the MGT AS and also in any of NEIT's associate degree programs.

Both the AS and BS programs in Business Management emphasize a blend of technical, people/interpersonal, and analytical knowledge and skills, practice in labs what students will be doing in the typical workplace, integrate material across courses and functional areas of business, and develop the approach of being a life-long learner, in particular in the areas of technology and management.

BS Business Management courses use both face-to-face and online learning experiences; this blend reflects today's workplace.

Students in the BS in Business Management program deepen their knowledge of management and leadership, accounting, finance, marketing, operations/service management, and effective interpersonal relationships and teamwork. The program incorporates the latest Microsoft Office Suite and related technology advances such as online portfolios and use of social media in business. Students have two management electives to allow deeper study in a chosen area, such as entrepreneurship or sales and marketing. Hands-on training is provided for management and interpersonal skills, such as negotiating, analyzing accounting information, or making presentations, as well as for more advanced use of Office Suite software including spreadsheets, databases, presentation and publishing software, and word processing.

Graduates of the MGT BS program may be qualified to work in many industries in a variety of positions such as business, accounting, or operations analyst, project manager, department or process supervisor, service manager, marketing analyst or customer service representative/manager, or business owner. Graduates who are already working may use their degree to apply for promotions.

Business Management
Bachelor of Science Degree

Quarter VII

Course	No.	Course Title	C	L	T
MGM	305	Managing Interpersonal & Team Effectiveness	2	2	3
MGM	311	Data Analysis and Reporting	1	4	3
MGM	314	Principles of Marketing	1	4	3
MA	*300*	*Statistics (MA/SCI Core)*	*4*	*0*	*4*
EN	*331*	*Research Writing (COM Core)*	*4*	*0*	*4*
			12	10	17

Quarter VIII

Course	No.	Course Title	C	L	T
MGM	335	Human Resource Management	2	2	3
MGM	355	21st Century Leadership	1	4	3
ELECTIVE		*Humanities Core*	*4*	*0*	*4*
		CHOOSE ONE			
MGM	160	Business Accounting and Financial Reporting (Only non-MGT AS graduates)	2	2	3
ELECTIVE		Technical Elective (Only MGT AS graduates)	3/4	0/2	3/4
			9-11	6/8	13/14

Quarter IX

Course	No.	Course Title	C	L	T
MGM	330	Managerial Accounting	2	2	3
MGM	398	Integrative Lab 1 – Business Start-Up & Decision Making	1	4	3
MGM	415	Career Advancement and Success	2	2	3
IT	375	Information Systems Management	3	2	4
EC	*301*	*The Global Economy (SS Core)*	*4*	*0*	*4*
			12	10	17

Quarter X

Course	No.	Course Title	C	L	T
MGM	411	Technology and Management Effectiveness	1	4	3
MGM	413	Business Presentations	1	4	3
MGM	425	Productions and Service Operations Management	1	4	3
MGM	430	Financial Management	3	2	4
ELECTIVE		*Math/Science Core*	*4*	*0*	*4*
			10	14	17

Quarter XI

Course	No.	Course Title	C	L	T
MGM	445	Negotiation	2	2	3
MGM	460	Investments	2	2	3
MGM	498	Integrative Lab II – Project Management Effectiveness	1	4	3
ELECTIVE		Management Elective	3	2	4
EN	*421*	*Technical Communications (COM Core)*	*4*	*0*	*4*
			12	10	17

Quarter XII

Course	No.	Course Title	C	L	T
MGM	485	Management of Change and Innovation	1	4	3
MGM	495	Strategic Management and Decision Making	2	2	3
MGM	496	Professional Portfolio	1	0	1
ELECTIVE		Management Elective	2	2	3
ELECTIVE		*Humanities, Social Sciences, or Arts/Foreign Language Core*	*4*	*0*	*4*
			10	8	14

Total Quarter Credit Hours = 95-96

Technical Elective Choices for Quarter VIII*

Course	No.	Course Title	C	L	T
AUT	302	Service Management Operations	3	2	4
CJ	380	Criminal Justice and the Media	3	2	4
IT	374	IT Project Management	3	0	3

*All electives listed above are not offered every quarter.

Legend

C = Number of lecture hours per week

L = Number of laboratory hours per week

T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one credit depending on the expected amount of pre- or post-lab work.

PLEASE NOTE: All liberal arts core courses are listed in italics.

All bachelor degree students are required to take a minimum of 28 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses.

Effective Teams and Projects (MGM 105), Accounting Fundamentals (MGM 130), Introduction to Business Analysis and Reporting (MGM 131), Small Business and the Law (BU 236), and Applied Math for Business (MA 200) or Technical Math I (MA 125) or their equivalents need to be taken either during the Associate Degree Program, while matriculating in Business Management, or during a prerequisite quarter.

Associate in Science Degree

The Civil Engineering Technology Program prepares graduates to become integral members of the engineering and construction team. The program emphasizes the practical application of construction technology and engineering principles.

A civil engineering technologist designs, engineers, analyzes, and assists in the supervision of building construction and infrastructure projects such as roadways, bridges, and environmental facilities. As an integral member of the engineering and construction team, the civil engineering technologist must have the ability to create and build structures that will answer the engineering, economic, safety, technical, and aesthetic requirements of a project. This program allows students to develop those necessary abilities by emphasizing the application of the fundamentals of civil engineering and design within the context of the scientific and technical aspects of materials, soils, planning, surveying, structures,

environmental systems, and construction. The program is also designed to instill within students a sense of professionalism and a desire to serve and contribute to society.

In the associate degree program, students concentrate on civil engineering technology fundamentals including: computer-aided drafting geared for the civil engineering industry (e.g. AutoCAD Civil 3D), construction documents, construction estimating, construction materials, structural analysis and design, surveying methods for land measurement, and soil mechanics. Additionally, students will also conduct field and laboratory testing on civil engineering materials and use computer applications to solve technical problems. Upon successful completion of the Civil Engineering Technology Associate Degree, students may choose to continue their education in a bachelor program or enter the profession. Graduates of the CET Associate Degree will be qualified for entry-level careers with civil engineering firms, survey companies, materials testing companies, or construction companies.

Students successfully completing the Associate Degree in Civil Engineering Technology may matriculate into the Bachelor Degree in Construction Management Technology or the Bachelor Degree in Civil Engineering Technology program currently under development at New England Tech.
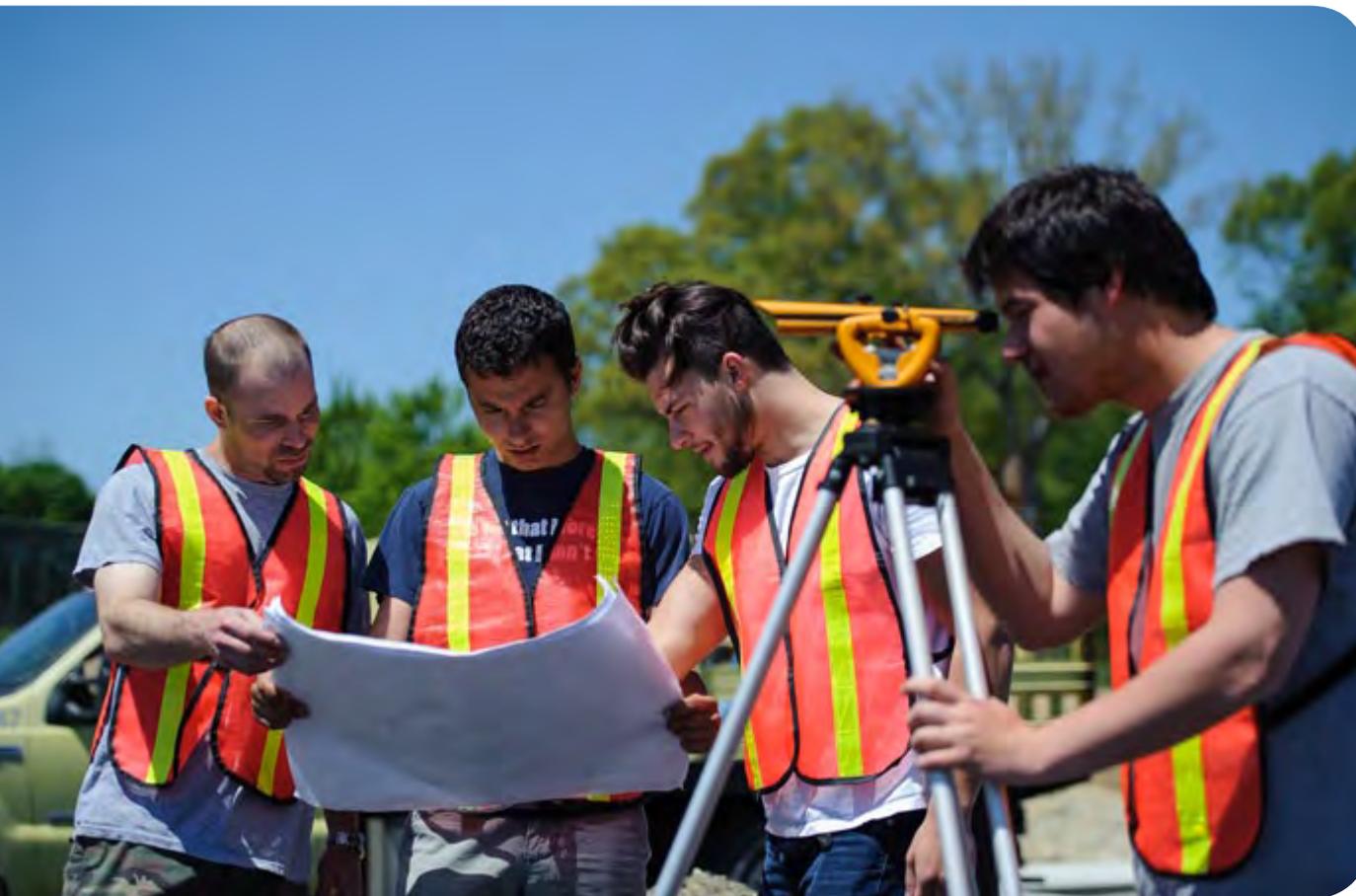
Civil Engineering Technology
Associate in Science Degree

Quarter I

Course	No.	Course Title	C	L	T
ABT	111	Introduction to Building Science	1	0	1
CET	110	Introduction to Civil Engineering Technology	3	0	3
CET	114	Introduction to CAD for Civil Engineering	2	4	4
		CHOOSE ONE (depending upon Math placement)			
MA	*100/110*	*Introduction to College Math (MA/SCI Core)*	*4*	*0*	*4*
-or-					
MA	*125*	*Technical Math I (MA/SCI Core)*			
		CHOOSE ONE *(depending upon English placement)*			
EN	*101*	*Introduction to Writing and Workplace Communication (COM Core)*	*4*	*0*	*4*
-or-					
EN	*102*	*Critical Thinking and College Writing (COM Core)*			
			14	4	16

Quarter II

Course	No.	Course Title	C	L	T
CET	120	Introduction to Transportation Design	3	0	3
CET	124	Construction Fundamentals & Materials	3	0	3
CET	128	Civil Documents & Design I	2	4	4
		CHOOSE ONE *(depending upon Quarter I)*			
MA	*125*	*Technical Math I (MA/SCI Core)*	*4*	*0*	*4*
-or-					
ELECTIVE		*Math/Science Core*			
		CHOOSE ONE *(depending upon Quarter I)*			
EN	*102*	*Critical Thinking and College Writing (COM Core)*	*4*	*0*	*4*
-or-					
ELECTIVE		*Humanities (or Arts/Foreign Language) or Social Sciences Core*			
			16	4	18

Quarter III

Course	No.	Course Title	C	L	T
CET	135	CAD II for Civil Engineering	2	4	4
CET	136	Introduction to Water & Waste Water Design	3	0	3
CET	138	Zoning & Land Use Planning	3	0	3
MA	*210*	*Technical Math II (MA/SCI Core)*	*4*	*0*	*4*
PHY	*200*	*Physics I & Lab (MA/SCI Core)*	*3*	*2*	*4*
			15	6	18

Quarter IV

Course	No.	Course Title	C	L	T
CET	215	Environmental & Sustainable Design	3	0	3
CET	216	Safety in Construction	3	0	3
CET	217	Surveying I	2	4	4
PHY	*300*	*Physics II (MA/SCI Core)*	*3*	*2*	*4*
ELECTIVE		*Humanities or Social Sciences Core*	*4*	*0*	*4*
			15	6	18

Quarter V

Course	No.	Course Title	C	L	T
CET	221	Estimating for Heavy Construction	2	2	3
MCT	215	Statics	3	2	4
CET	225	Civil Documents & Design II	2	4	4
CHM	*300*	*Chemistry I and Lab (MA/SCI Core)*	*3*	*2*	*4*
ELECTIVE		*Humanities or Social Sciences Core*	*4*	*0*	*4*
			14	10	19

Quarter VI

Course	No.	Course Title	C	L	T
CET	231	Surveying II	2	4	4
MCT	224	Mechanics of Materials	3	2	4
CET	235	Materials Testing & Quality Control	2	2	3
MA	*310*	*Calculus I (MA/SCI Core)*	*4*	*0*	*4*
ELECTIVE		Technical Elective			
		Choose One Technical Elective			
ABT	112	Technical Drafting and Graphic Communication	2	2	3
ABT	124	Construction Methods and Materials (required for students entering the BS Construction Management program)	3	0	3
ABT	218	Building Information Modeling BIM I	2	4	4
MGM	107	Introduction to Business	2	2	3
MGM	130	Accounting Fundamentals	3	2	4
			13-14	8-12	18/19

Total Quarter Credit Hours = 107-108

Legend

C = Number of lecture hours per week

L = Number of laboratory hours per week

T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one credit depending on the expected amount of pre- or post-lab work.

PLEASE NOTE: All liberal arts core courses are listed in italics.

All associate degree students are required to take 32 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses. Students who place out of EN 101, EN 102 or MA 100/110 must still take 32 credits of core courses.

Associate in Science Degree

Clinical Medical Assistant is an associate degree program offering focused training in the clinical patient care skills needed in today's rapidly changing medical environment. An introduction to basic administrative skills common to the field is included.

Clinically, students learn about the human body as a whole, functioning unit; about providing the best in patient care; and about diagnostic techniques. Clinical courses are competency-based with students afforded the opportunity to practice in small classes with high-tech medical equipment until competent. Skills such as therapeutic ultrasound, automated blood chemistries, medication administration by all routes, phlebotomy and computerized diagnostic multichannel EKGs are included. Extensive hands-on laboratory experience is also included. Realistic clinical experience is gained in the medical community during 180 hours spent in the role of entry-level Clinical Medical Assistant in a facility chosen by the student during the last 2 quarters of the program.

Administratively, students gain an understanding of the changing health care system of the United States and its business aspects, such as the scheduling and tracking of patients; billing and charging; and the preparation of medical reports. The Electronic Medical Record (EMR) is utilized in a simulated medical office environment, using software common in the field.

At the conclusion of the program, students are able to perform patient care skills, laboratory skills and point-of-service diagnostic testing commonly done in a physician's office, clinic or laboratory on each of the body systems and with the further ability to manage administrative aspects of a modern medical environment. Students completing the program are eligible to take a national certification exam. Graduates may work in an individual physician's office, urgent care facility, or in a larger organization such as a hospital or health maintenance organization. After completing some prerequisites*, graduates of this program are also eligible to continue their education with a Bachelor of Science degree in Business Management.

Clinical Medical Assistant
Associate in Science Degree

Quarter I

Course	No.	Course Title	C	L	T
BIO	100	Anatomy and Physiology I (MA/SCI Core)	4	0	4
CMA	100	Law and Professionalism in the Medical Office	3	0	3
CMA	101	Medical Language I	1	0	1
		CHOOSE ONE *(depending upon English placement)*			
EN	*101*	*Introduction to Writing and Workplace Communication (COM Core)*	*4*	*0*	*4*
-or-					
EN	*102*	*Critical Thinking and College Writing (COM Core)*			
			12	0	12

Quarter II

Course	No.	Course Title	C	L	T
BIO	120	Anatomy and Physiology II (MA/SCI Core)	4	0	4
CMA	121	Medical Language II	3	0	3
CMA	126	Clinical Documents and Communications	0	2	1
MGM	112	Introduction to Office Software	2	2	3
		CHOOSE ONE *(depending upon Quarter I)*			
EN	*102*	*Critical Thinking and College Writing (COM Core)*	*4*	*0*	*4*
-or-					
ELECTIVE		*Communications Core*			
			13	4	15

Intersession

Course	No.	Course Title	C	L	T
ELECTIVE		Humanities or Arts/Foreign Language Core	4	0	4
			4	0	4

Quarter III

Course	No.	Course Title	C	L	T
HS	201	Introduction to Medical Ethics and Bioethics	3	0	3
BIO	131	Pathophysiology	2	0	2
CMA	131	Medical Language III	2	0	2
CMA	132	Clinical Laboratory Tests	2	0	2
CMA	136	Clinical Care Techniques I	2	6	5
PS	*201*	*Introduction to Psychology (SS Core)*	*4*	*0*	*4*
			15	6	18

Quarter IV

Course	No.	Course Title	C	L	T
CMA	217	Clinical Care Techniques II	2	6	5
CMA	220	The Electronic Medical Record	2	2	3
CMA	225	Medication Administration	2	2	3
		CHOOSE ONE *(depending upon Math placement)*			
MA	*100/110*	*Introduction to College Math (MA/SCI Core)*	*4*	*0*	*4*
-or-					
ELECTIVE		*Math/Science Core*			
			10	10	15

Quarter V

Course	No.	Course Title	C	L	T
CMA	227	Clinical Laboratory Applications I	2	4	4
CMA	228	Comprehensive Medical Office Practice I (1st 5 weeks)	1	4	3
CMA	229	Comprehensive Medical Office Practice II (2nd 5 weeks)	1	4	3
CMA	236	Clinical Experience I	1	9	4
			5	21	14

Quarter VI

Course	No.	Course Title	C	L	T
CMA	237	Clinical Laboratory Applications II	2	6	5
CMA	240	Clinical Experience II & Clinical Project	1	11	5
MA	*121*	*Business Math (MA/SCI Core)*	*4*	*0*	*4*
			7	17	14

Total Quarter Credit Hours = 92

Legend

C = Number of lecture hours per week

L = Number of laboratory hours per week

T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one credit depending on the expected amount of pre- or post-lab work.

PLEASE NOTE: All liberal arts core courses are listed in italics.

All associate degree students are required to take 32 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses. Students who place out of EN 101, EN 102 or MA 100/110 must still take 32 credits of core courses.

*Students considering a Bachelor of Science Degree in Business Management need to take Effective Teams and Projects (MGM 105), Accounting Fundamentals (MGM 130), Introduction to Business Analysis and Reporting (MGM 131), Small Business and the Law (BU 236), and Applied Math for Business (MA 200) or Technical Math I (MA 125) or their equivalents either during their associate degree program or during a prerequisite quarter. See your student advisor to schedule these courses.

Bachelor of Science Degree

The Bachelor of Science Degree in Construction Management prepares students to be proficient in the process and methodology of constructing the built environment relative to design, technology, engineering, building science, sustainability, and social responsibility. It is based upon the premise that the construction management professional must possess a core knowledge which allows them to integrate design, engineering, and technology into the process of construction.

The program allows students to develop the necessary skills by emphasizing the theoretical and practical concepts of design, building systems, components, engineering, and construction practices. Additional areas of study include principles of construction management, project management, advanced estimating and scheduling, construction contract administration, and construction law. The program is also designed to instill within students a sense of professionalism and a desire to serve and contribute to society through solving its problems in technically, environmentally, and socially acceptable ways.

Students may enter the Construction Management program after earning their Associate Degree in Architectural/Building Engineering Technology or Building Construction and Design Technology at the New England Institute of Technology, or they may transfer from other comparable college programs. The program culminates with a Senior Thesis course. In this final term, students must demonstrate their understanding of and ability to utilize and synthesize the technical, engineering, and management concepts they developed throughout their New England Tech experience.

Graduates of the Construction Management program will be qualified for a wide range of exciting employment opportunities in several fields in the public and private sector, including construction management, building engineering, real estate, land development, construction sales, and facilities management.

Construction Management
Bachelor of Science Degree

Quarter VII

Course	No.	Course Title	C	L	T
ABT	314	Construction Contracts & Specifications	3	0	3
ABT	315	Structural Wood Design	2	4	4
CMT	313	Introduction to Construction Management	3	0	3
ELECTIVE		*Math/Science Core*	*4*	*0*	*4*
EN	*331*	*Research Writing (COM Core)*	*4*	*0*	*4*
			16	4	18

Quarter VIII

Course	No.	Course Title	C	L	T
ABT	325	Soil Mechanics & Foundation Design	3	0	3
ABT	328	Structural Steel Design	2	4	4
CMT	329	Revit for Construction Managers	3	0	3
MGM	445	Negotiations	2	2	3
ELECTIVE		*Humanities Core*	*4*	*0*	*4*
			14	6	17

Quarter IX

Course	No.	Course Title	C	L	T
ABT	331	Advanced Environmental Systems	3	0	3
ABT	334	Site Engineering & Planning	2	2	3
ABT	338	Reinforced Concrete Design	4	0	4
CMT	331	Specifications & Quality Control	3	0	3
MA	*310*	*Calculus I (MA/SCI Core)*	*4*	*0*	*4*
			16	2	17

Quarter X

Course	No.	Course Title	C	L	T
ABT	412	Sustainability in Construction	3	0	3
CMT	411	Project Scheduling	3	2	4
CMT	412	Construction Practice	3	0	3
CMT	415	Construction Estimating II	3	0	3
EN	*421*	*Technical Communications (COM Core)*	*4*	*0*	*4*
			16	2	17

Quarter XI

Course	No.	Course Title	C	L	T
ABT	414/424	Current Topics I or Current Topics II	3	0	3
ABT	426	Senior Thesis Proposal	1	0	1
CMT	422	Construction Site Safety	3	0	3
CMT	423	Construction Estimating III	3	0	3
ELECTIVE		*Social Sciences Core*	*4*	*0*	*4*
			14	0	14

Quarter XII

Course	No.	Course Title	C	L	T
ABT	433	Construction Law	3	0	3
CMT	434	Ethics & the Construction Industry	3	0	3
CMT	435	Senior Thesis	2	6	5
MGM	340	Engineering Finance	2	2	3
ELECTIVE		*Humanities, Social Sciences, or Arts/Foreign Language Core*	*4*	*0*	*4*
			14	8	18

Total Quarter Credit Hours = 101

Legend

C = Number of lecture hours per week

L = Number of laboratory hours per week

T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one credit depending on the expected amount of pre- or post-lab work.

PLEASE NOTE: All liberal arts core courses are listed in italics.

All bachelor degree students are required to take 28 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses.

Master of Science Degree

The Master's program in Construction Management (MSCM) at New England Institute of Technology is designed for construction professionals who desire to advance their technical and managerial knowledge in the construction industry. The program emphasizes the relevance of continuous learning to personal and professional growth through the combination of advanced traditional construction management courses and an integrated management core.

The MSCM program is designed to equip current or aspiring construction managers with the necessary tools to make thoughtful decisions that affect an organization's management needs. The program's mission is built around central themes that drive modern construction industry operations: best practices of leaders and management professionals in the construction industry, construction project accounting and finance, environmental and health and safety policy, construction law, and the software applications that support the construction management profession.

Successful graduates may be able to advance their careers by qualifying for positions such as project managers, project executives, directors of construction operations, and comparable leadership roles in construction safety, quality control, and estimating/scheduling.

Construction Management
Master of Science Degree

Quarter I

Course No.		Course Title	C	L	T
MSCM	510	Fundamentals of Project Management	4	0	4
MSCM	511	Construction Delivery Methods	4	0	4
			8	0	8

Quarter II

Course No.		Course Title	C	L	T
MSCM	520	Effective Projects and Teams	4	0	4
MSCM	521	Risk Management	4	0	4
			8	0	8

Quarter III

Course No.		Course Title	C	L	T
MSCM	531	Construction Health and Safety	4	0	4
MSCM	532	Construction Project Finance & Cost Accounting	4	0	4
			8	0	8

Quarter IV

Course No.		Course Title	C	L	T
MSCM	541	Lean Construction Principles & Practices	4	0	4
		CHOOSE ONE			
MSCM	542	Building Information Modeling	4	0	4
- or -					
MSCM	543	Infrastructure Planning & Development			
			8	0	8

Quarter V

Course No.		Course Title	C	L	T
MSCM	512	Construction and the Environment	4	0	4
MSCM	513	Relationship & Dispute Management	4	0	4
			8	0	8

Quarter VI

Course No.		Course Title	C	L	T
MSCM	540	Leadership in the 21st Century	4	0	4
			4	0	4

Total Quarter Credit Hours = 44

LEGEND

C = Number of lecture hours per week
L = Number of laboratory hours per week
T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one credit depending on the expected amount of pre- or post-lab work.

Subject to change.

Associate in Science Degree

The Associate in Science Degree in Criminal Justice provides dynamic and intensive instruction in all aspects of the criminal justice system. The first quarter focuses on core foundational criminal justice courses like Criminal Justice, Corrections and the Court System. Starting in the second quarter and continuing into the sixth quarter, students are exposed to various specialized disciplines under the criminal justice umbrella and will gain valuable hands-on experience in a variety of topics, including financial and cybercrimes; police operations and report writing; criminal procedure; forensic science; firearm skills; drugs; and terrorism, gang and organized crime issues.

Criminal Justice students will utilize the skills and knowledge acquired to participate in an all-encompassing Criminal Justice (CJ) Portfolio beginning in the second quarter and continuing until graduation. The CJ Portfolio is a life-like investigative assignment starting with the commission of a mock crime event, gathering of victim and witness statements, processing a crime scene, and collecting evidence. This realistic process will culminate with the presentation of testimony in a Moot Court/Mock Trial scenario during which students present a portfolio that they have constructed and maintained during the entire investigative process.

In the sixth quarter, students may have the option to participate in a Criminal Justice Internship where they will work with criminal justice professionals in the community. During this Internship, students will have opportunities to apply classroom training to real life situations in various police departments, courts, correctional facilities, and investigative agencies and gain first-hand knowledge of the Criminal Justice system. In addition, after completing certain prerequisites, graduates of this program are eligible to continue on for a Bachelor of Science Degree in Criminal Justice.

Graduates of this program will be qualified to seek entry-level employment in a number of challenging criminal justice professions, such as police officer, state trooper, correctional officer, court officer, criminal justice counselor, federal law enforcement officer, private security officer, crime scene investigator, corporate loss prevention, and insurance claims investigator. (Please note: a criminal record may affect a graduate's ability to qualify for some law enforcement positions.)

Criminal Justice
Associate in Science Degree

Quarter I

Course	No.	Course Title	C	L	T
CJ	110	Criminal Justice	4	0	4
CJ	112	Corrections	4	0	4
CJ	114	The Court System	3	2	4
		CHOOSE ONE *(depending upon English placement)*			
EN	*101*	*Introduction to Writing and Workplace Communication (COM Core)*	*4*	*0*	*4*
-or-					
EN	*102*	*Critical Thinking and College Writing (COM Core)*			
			15	2	16

Quarter II

Course	No.	Course Title	C	L	T
CJ	120	Forensics I	4	2	5
CJ	122	Criminal Law	4	2	5
		CHOOSE ONE *(depending upon Quarter I)*			
EN	*102*	*Critical Thinking and College Writing (COM Core)*	*4*	*0*	*4*
-or-					
ELECTIVE		*Communications Core*			
		CHOOSE ONE *(depending upon Math placement)*			
MA	*100/110*	*Introduction to College Math (MA/SCI Core)*	*4*	*0*	*4*
-or-					
ELECTIVE		*Math/Science Core*			
			16	4	18

Quarter III

Course	No.	Course Title	C	L	T
CJ	130	Forensics II/Portfolio Management	2	4	4
CJ	134	Report Writing	2	4	4
CJ	244	Drugs & the Law	3	2	4
SO	*231*	*Crime and Deviance (SS Core)*	*4*	*0*	*4*
			11	10	16

Quarter IV

Course	No.	Course Title	C	L	T
CJ	132	Criminal Procedure	4	2	5
CJ	240	Interviewing & Investigation Techniques	2	2	3
CJ	241	Introduction to Digital Forensics	2	4	4
EN	*211*	*Oral Communications (COM Core)*	*4*	*0*	*4*
			12	8	16

Quarter V

Course	No.	Course Title	C	L	T
CJ	250	Police Operations/Simulated Firearms Skills	3	2	4
CJ	254	Sentencing – Probation & Parole	3	2	4
CJ	256	Portfolio Prep & Management	0	2	1
CJ	258	Contemporary Criminal Justice Issues	3	0	3
ELECTIVE		*Math/Science Core*	*4*	*0*	*4*
			13	6	16

Quarter VI

Course	No.	Course Title	C	L	T
CJ	260	Moot Court/Mock Trial	2	2	3
CJ	266	Gangs & Organized Crime	4	0	4
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	*4*	*0*	*4*
		CHOOSE ONE			
CJ	262	Internship	1	10	3
-or-					
CJ	264	Terrorism – Concepts & Analysis	4	0	4
		CHOOSE ONE			
SS	*204*	*Juvenile Justice System in America (SS Core)*	*4*	*0*	*4*
-or-					
SS	*206*	*Constitutional Values in the 21st Century (SS Core)*	*4*	*0*	*4*
w/ Internship option			15	12	18
w/ Terrorism – Concepts & Analysis option			18	2	19

Total Quarter Credit Hours = 100 w/ Internship option
Total Quarter Credit Hours = 101 w/ Terrorism – Concepts & Analysis option

Legend

C = Number of lecture hours per week
L = Number of laboratory hours per week
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PLEASE NOTE: All liberal arts core courses are listed in italics.

All associate degree students are required to take 32 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses. Students who place out of EN 101, EN 102 or MA 100/110 must still take 32 credits of core courses.

Bachelor of Science Degree

The Bachelor of Science Degree in Criminal Justice provides dynamic and intensive instruction in all aspects of the Criminal Justice system. The program expands upon the core knowledge and skills attained by the student in the Associate in Science Degree in Criminal Justice.

The program exposes students to more rigorous study of Criminal Justice topics like Case Studies in Criminal Forensics, Domestic & Family Law Issues, Integration of Criminal Law & Criminal Procedure, and Contemporary Issues in Corrections. Students are also provided with the opportunity to choose classes

that focus on Digital Forensics or more traditional Criminal Justice topics in designated quarters.

Students are exposed to various specialized disciplines in criminal justice such as domestic terrorism, ethics, financial and white-collar crimes, corporate and private security, and administrative issues. Students will also study police operations, including traffic enforcement, report writing, use of force issues, critical incident tactics and advanced investigation techniques.

Bachelor of Science Degree in Criminal Justice Technology students will utilize the skills and knowledge acquired in each quarter to participate in a challenging multi-session Criminal Justice Senior Capstone in their final quarter. The Criminal Justice Senior Capstone Project is a real time investigative assignment beginning with a mock crime event and involves gathering information from victims and/or witnesses, processing the crime scene, and culminates with drafting a comprehensive report and evidence portfolio that will be presented to a panel of law enforcement professionals.

In the final quarter, students may have the option to participate in a Criminal Justice Senior Externship where they will work with criminal justice professionals in the community. During this Senior Externship, students will have opportunities to apply classroom training to real life situations in various police departments, courts, correctional facilities, and investigative agencies and gain first-hand knowledge of the Criminal Justice System.

Graduates of this program will be qualified to seek entry-level employment in a number of challenging criminal justice professions, such as police officer, state trooper, correctional officer, court officer, criminal justice counselor, federal law enforcement officer, private security officer, crime scene investigator, corporate loss prevention, and insurance claims investigator. (Please note: a criminal record may affect a graduate's ability to qualify for some law enforcement positions.)

Criminal Justice
Bachelor of Science Degree

Quarter VII

Course	No.	Course Title	C	L	T
CJ	371	Evidence and the Law	4	0	4
CJ	372	Case Studies in Criminal Forensics	3	2	4
CJ	374	Domestic and Family Law Issues	2	2	3
EN	331	Research Writing (COM Core)	4	0	4
			13	4	15

Quarter VIII

Course	No.	Course Title	C	L	T
CJ	380	Criminal Justice and the Media	3	2	4
CJ	382	Integration of Criminal Law and Criminal Procedure	2	2	3
CJ	384	Contemporary Issues in Corrections	2	2	3
SS	303	Communication in the Global Workplace (COM Core)	4	0	4
ELECTIVE		Math/Science Core	4	0	4
			15	6	18

Quarter IX

Course	No.	Course Title	C	L	T
CJ	393	Advanced Report Writing Skills	4	0	4
CJ	394	Issues of Diversity in Criminal Justice	2	2	3
CJ	389	Mobile Device Forensics	2	4	4
ELECTIVE		Humanities Core	4	0	4
			12	6	15

Quarter X

Course	No.	Course Title	C	L	T
CJ	400	Ethics and the Criminal Justice Professional	3	0	3
CJ	402	Use of Force and the Consequences	4	0	4
CJ	404	Digital Forensics Investigations and Applications	4	0	4
ELECTIVE		Math/Science Core	4	0	4
			15	0	15

Quarter XI

Course	No.	Course Title	C	L	T
CJ	410	Advanced Techniques in Criminal Forensics	4	0	4
CJ	412	Critical Incident Response and Tactics	2	2	3
CJ	414	Corporate and Private Security	3	0	3
CJ	416	Capstone Investigation and Preparation	1	2	2
ELECTIVE		Communications Core	4	0	4
			14	4	16

Quarter XII

Course	No.	Course Title	C	L	T
CJ	420	Criminal Justice Administration Issues	3	0	3
CJ	421	Women and Crime	4	0	4
CJ	424	Senior Capstone	2	2	3
CJ	430	Career Preparation for the Criminal Justice Professional	2	0	2
ELECTIVE		Humanities, Social Sciences, or Arts/Foreign Language Core	4	0	4
		CHOOSE ONE			
CJ	426	Senior Internship	1	10	3
MGM	335	Human Resource Management	2	2	3
MGM	445	Negotiation	2	2	3
			16-17	4/12	19

Total Quarter Credit Hours = 98

Associate in Science Degree

The Digital Media Production program is characterized by the use of a project-oriented approach with an emphasis on program development and team-building skills that are required by these industries. Students are exposed to broadcast-quality equipment while acquiring both theoretical and practical knowledge.

Upon completion of the Associate in Science Degree in Digital Media Production, students will be qualified to obtain employment in the following industries: broadcast/non-broadcast television, radio and audio recording. Students are prepared for careers in video production which include: director, technical director, lighting director, camera operator, master control operator, videographer, video editor, producer, and production assistant.

Opportunities in audio and radio production include: recording technician, board director, editor, video and radio producer, copywriter, and on-air talent.

In addition, after completing certain prerequisites*, graduates of this program are eligible to continue on for a Bachelor of Science Degree in Digital Media Production or in Business Management.
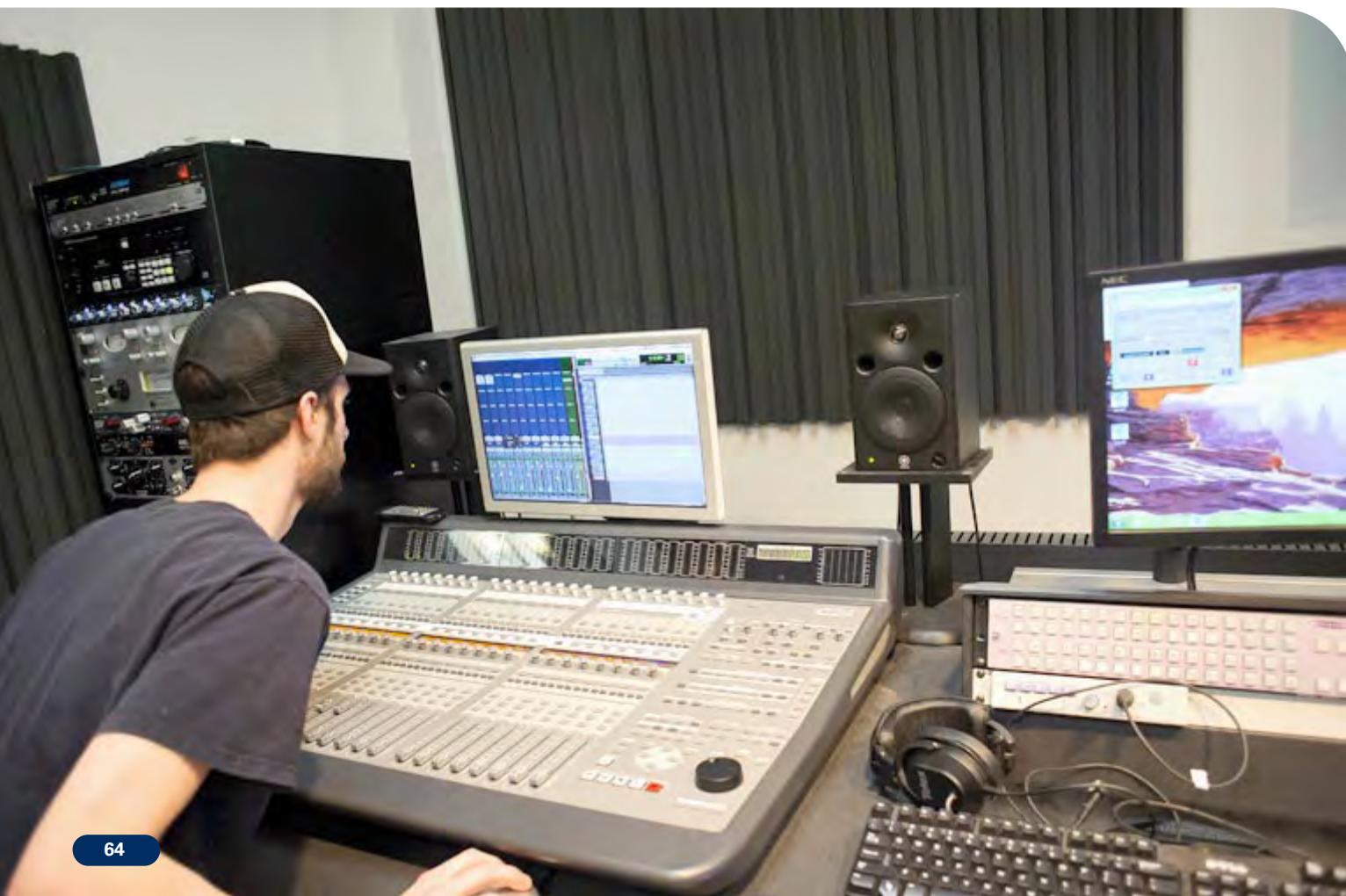
Digital Media Production
Associate in Science Degree

Quarter I

Course	No.	Course Title	C	L	T
DMP	101	Video Techniques/Studio 1	2	6	5
DMP	105	Visual Design	2	2	3
DMP	118	Scriptwriting	2	0	2
		CHOOSE ONE *(depending upon English placement)*			
EN	*101*	*Introduction to Writing and Workplace Communication (COM Core)*	*4*	*0*	*4*
-or-					
EN	*102*	*Critical Thinking and College Writing (COM Core)*			
			10	8	14

Quarter II

Course	No.	Course Title	C	L	T
DMP	106	Motion Graphics	2	4	4
DMP	125	Digital Editing	2	4	4
DMP	127	Field Shooting/Lighting	2	2	3
		CHOOSE ONE *(depending upon Math placement)*			
MA	*100/110*	*Introduction to College Math (MA/SCI Core)*	*4*	*0*	*4*
-or-					
MA	*121*	*Business Math (MA/SCI Core)*			
		CHOOSE ONE *(depending upon Quarter I)*			
EN	*102*	*Critical Thinking and College Writing (COM Core)*	*4*	*0*	*4*
-or-					
EN	*211*	*Oral Communications (COM Core)*			
			14	10	19

Quarter III

Course	No.	Course Title	C	L	T
DMP	136	Audio Recording 1	2	2	3
DMP	211	Media Ethics	3	0	3
DMP	215	Corporate Media	2	4	4
BU	236	Small Business and the Law (SS Core)	4	0	4
		CHOOSE ONE *(depending upon Math placement)*			
MA	*121*	*Business Math (MA/SCI Core)*	*4*	*0*	*4*
-or-					
ELECTIVE		*Math/Science Core*			
			15	6	18

Quarter IV

Course	No.	Course Title	C	L	T
DMP	134	Studio Production	2	6	5
DMP	146	Audio Recording 2	2	2	3
DMP	217	From Pre to Post	2	2	3
		CHOOSE ONE *(depending upon Quarter II)*			
EN	*211*	*Oral Communications (COM Core)*	*4*	*0*	*4*
-or-					
ELECTIVE		*Communications Core*			
			10	10	15

Quarter V

Course	No.	Course Title	C	L	T
DMP	227	Radio 1 – Programming	2	4	4
DMP	231	Digital Filmmaking	3	6	6
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	*4*	*0*	*4*
			9	10	14

Quarter VI

Course	No.	Course Title	C	L	T
DMP	237	Radio 2 – Talk and Information	2	4	4
DMP	250	Associate Portfolio	2	2	3
ELECTIVE		*Social Sciences Core*	*4*	*0*	*4*
		CHOOSE ONE			
DMP	240	Internship*	1	10	3
-or-					
DMP	232	Associate Final Project	1	4	3
			9	10/16	14

Total Quarter Credit Hours = 94

Legend

C = Number of lecture hours per week
L = Number of laboratory hours per week
T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one credit depending on the expected amount of pre- or post-lab work.

5 Field Hours = 1 Quarter Credit Hour

PLEASE NOTE: All liberal arts core courses are listed in italics.

All associate degree students are required to take 32 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses. Students who place out of EN 101, EN 102 or MA 100/110 must still take 32 credits of core courses.

*Students considering a Bachelor of Science Degree in Business Management need to take Effective Teams and Projects (MGM 105), Accounting Fundamentals (MGM 130), Introduction to Business Analysis and Reporting (MGM 131), Small Business and the Law (BU 236), and Applied Math for Business (MA 200) or Technical Math I (MA 125) or their equivalents either during their associate degree program or during a prerequisite quarter. See your student advisor to schedule these courses.

Bachelor of Science Degree

The bachelor's program in Digital Media Production builds on the foundational skills gained in the associate degree program in Digital Media Production. In addition, graduates of the Graphics, Multimedia and Web Design program are also able to enter this degree program by means of alternate seventh quarter courses. The curriculum's emphasis on the electronic media industry allows students to attain a high level of digital production expertise.

Digital Media Production video courses are designed to develop professional level skills in broadcast, non-broadcast, client-based and new media programs. Audio courses enhance students' abilities in multi-track studio recording and mixing techniques. Students will also be introduced to remote location recording, sound reinforcement, and mixing for digital film.

Experience in multi-camera location shooting, visual design, commercial, news, documentary, music video, and audio productions offer students opportunities to apply their creative talents and broaden their career options. Throughout the curriculum, students are challenged to apply real-world management-level problem-solving techniques within their production teams and when dealing with clients.

The capstone project focuses on developing and producing a video or audio program for an outside client's product or service. Acting as freelance producers, students work to their predefined budgets, production schedules, and scripts to deliver their finished programs on time while meeting client expectations.

Digital Media Production
Bachelor of Science Degree

Quarter VII – (For graduates of the associate degree in Digital Media Production)

Course	No.	Course Title	C	L	T
DMP	305	Digital Editing 2	1	4	3
DMP	307	Visual Design 2	3	2	4
DMP	325	Remote Radio Production (5 weeks)	1	2	2
DMP	328	Music Recording Techniques (5 weeks)	1	2	2
EN	*331*	*Research Writing (COM Core)*	*4*	*0*	*4*
			10	10	15

-OR-

Quarter VII – (For graduates of the associate degree in Graphics, Multimedia and Web Design)

Course	No.	Course Title	C	L	T
DMP	302	Introduction to Digital Audio (5 Weeks)	1	2	2
DMP	305	Digital Editing 2	1	4	3
DMP	321	Digital Production Techniques	2	4	4
DMP	328	Music Recording Techniques (5 Weeks)	1	2	2
EN	*331*	*Research Writing (COM Core)*	*4*	*0*	*4*
			9	12	15

Quarter VIII

Course	No.	Course Title	C	L	T
DMP	331	News Production	1	4	3
DMP	336	Multi-Track Recording	2	2	3
DMP	338	Broadcast Pre-Production (5 Weeks)	2	0	2
DMP	357	Field Audio Production	2	4	4
DMP	406	The Business of Music and Radio Station Management (5 Weeks)	2	0	2
SS	*304*	*Digital Media & the Law (SS Core)*	*4*	*0*	*4*
			13	10	18

Quarter IX

Course	No.	Course Title	C	L	T
DMP	380	Visual Effects	1	4	3
DMP	410	Sound for Picture	1	2	2
DMP	421	Video Post-Production	0	4	2
DMP	447	Audio Post-Production	2	4	4
EN	*421*	*Technical Communications (COM Core)*	*4*	*0*	*4*
			8	14	15

Quarter X

Course	No.	Course Title	C	L	T
DMP	337	Sound Reinforcement 1	1	4	3
DMP	401	Documentary Filmmaking	3	4	5
DMP	423	Advertising	2	2	3
ELECTIVE		*Math/Science Core*	*4*	*0*	*4*
ELECTIVE		*Humanities Core*	*4*	*0*	*4*
			14	10	19

Quarter XI

Course	No.	Course Title	C	L	T
DMP	402	Freelance Project Pre-Production	3	0	3
DMP	426	Commercial Production	1	2	2
DMP	431	Remote Production	2	4	4
DMP	449	Mixdown	2	2	3
ELECTIVE		*Math/Science Core*	*4*	*0*	*4*
			12	8	16

Quarter XII

Course	No.	Course Title	C	L	T
DMP	440	Career Preparation	2	0	2
DMP	445	Sound Reinforcement 2	1	4	3
DMP	451	Digital Portfolio	2	2	3
DMP	455	Freelance Production*	0	6	3
ELECTIVE		*Humanities, Social Sciences, or Arts/Foreign Language Core*	*4*	*0*	*4*
			9	12	15

Total Quarter Credit Hours = 98

Legend

C = Number of lecture hours per week
L = Number of laboratory hours per week
T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one credit depending on the expected amount of pre- or post-lab work.

PLEASE NOTE: All liberal arts core courses are listed in italics.

All bachelor degree students are required to take 28 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses.

*The following course may be used in place of DMP 455 under certain circumstances.

Course	No.	Course Title	C	L	T
DMP	416	Production Practicum (Department Chair Permission)	1	4	3

Bachelor of Science Degree

The Bachelor of Science Degree in Electrical Engineering Technology (ELT) is designed primarily for those students who already possess an associate degree in fields related to Electronics or Electrical Technology. The ELT program at NEIT emphasizes the hands-on, practical approach to the mastery of Electrical Engineering Technology. This approach is supplemented in the ELT program with increasing levels of electronics and electrical theory, industrial controls, mathematics, and physics. In addition to the normal laboratory performance and theory testing, participants in the ELT program are also expected to demonstrate competence in using both oral and written skills. This program is designed both to educate and to provide the personal skills for self-directed learning throughout the student's professional life.

The ELT program is a unique combination of two traditional electronic and electrical topics. The study of electronic components, electronic subsystems and programming of microprocessor systems is combined with that of automation systems or advanced industrial controls, energy management and process control. ELT students are presented with applications of complex automation controllers, network communications, data acquisition, process manufacturing and microcontroller systems in order to develop an increased level of understanding which enhances their professional value to prospective employers. At the conclusion of the ELT program, the students are expected to develop and synthesize their own design project demonstrating the applied skills acquired throughout the program or find an internship in a related field. The "hybrid" approach of the ELT program that combines traditional electronic and electrical skill sets provides students with a unique knowledge base that will allow them to pursue careers under the direction of an engineering staff but above that of the traditional electrical worker.

Graduates of this program are qualified for positions in product development, operations, or technical service. The engineering technologist works with a professional engineer or scientist in converting scientific knowledge and craftsmanship into products and techniques.

ACCREDITATION STATUS

The Bachelor of Science Degree program in Electrical Engineering Technology is accredited by the Engineering Technology Accreditation Commission of ABET, http://www.abet.org.

Electrical Engineering Technology
Bachelor of Science Degree

Quarter VII

Course	No.	Course Title	C	L	T
ELT	314	C++ Programming	3	2	4
ELT	310	Programmable Automation Controllers and Lab	3	2	4
MA	*310*	*Calculus I (MA/SCI Core)*	*4*	*0*	*4*
PHY	*300*	*Physics II (MA/SCI Core)*	*3*	*2*	*4*
			13	6	16

Quarter VIII

Course	No.	Course Title	C	L	T
ELT	320	SCADA and Communication Systems and Lab	3	2	4
MCT	322	Fluid Power	3	2	4
ELT	364	Digital Circuit Design	3	2	4
CHM	*300*	*Chemistry I & Lab (MA/SCI Core)*	*3*	*2*	*4*
			12	8	16

Quarter IX

Course	No.	Course Title	C	L	T
ELT	374	Circuit Analysis I	3	2	4
ELT	360	Embedded Microcontrollers	4	0	4
ELT	362	Embedded Microcontrollers Lab	0	4	2
EN	*331*	*Research Writing (COM Core)*	*4*	*0*	*4*
			11	6	14

Quarter X

Course	No.	Course Title	C	L	T
ELT	384	Circuit Analysis II	3	2	4
ELT	463	Sensors and Signal Conditioning	3	2	4
ELT	410	Electrical Design and Energy Management & Lab	3	2	4
EN	*421*	*Technical Communications (COM Core)*	*4*	*0*	*4*
			13	6	16

Quarter XI

Course	No.	Course Title	C	L	T
ELT	475	Automation and Process Control & Lab	3	2	4
ELT	472	Introduction to Senior Project	2	0	2
EC	*301*	*The Global Economy (SS Core)*	*4*	*0*	*4*
ELT	486	LabVIEW Programming	3	2	4
-or-					
ELECTIVE		Technical Elective (see chart below)	3	2	4
			12	4	14

Quarter XII

Course	No.	Course Title	C	L	T
ELT	480	Senior Project	2	4	4
ELT	482	Senior Project Seminar	2	0	2
HU	*331*	*Ethics and Technology (HU Core)*	*4*	*0*	*4*
ELT	481	Engineering Internship	0	20	4
-or-					
ELECTIVE		Technical Elective (see chart below)	3	2	4
			8/11	6/24	14

Total Quarter Credit Hours (58 Technical Credits 32 Credits Liberal Arts) = 90

Technical Elective Choices for Quarter XI or XII

Course	No.	Course Title	C	L	T
ELT	420	Building Automation Systems & Lab	3	2	4
IT	374	IT Project Management	3	0	3
MCT	115	Computer Aided Design I	3	2	4
MCT	239	Quality	3	2	4

Business Management Courses (as space is available)

Course	No.	Course Title	C	L	T
MGM	314	Principles of Marketing	1	4	3
MGM	335	Human Resource Management	2	2	3
MGM	355	21st Century Leadership	1	4	3
MGM	413	Business Presentations	1	4	3

Legend

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PLEASE NOTE: All liberal arts core courses are listed in italics.

All bachelor degree students are required to take 28 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses.

Associate in Science Degree

The Electrical Technology program trains students for entry-level careers in the electrical industry. Some of the diverse careers open to graduates are construction electrician, maintenance electrician, photovoltaic installation technician, power system technician, electrical relay technician, electrical research technician, electrical distribution sales, electro-mechanical technician, electrical technical support, and entry level controls engineer.

The curriculum integrates electrical theory and practical application to give students not only the manual skills to wire and install electrical systems and apparatus but also the mathematical and practical knowledge to support, explain and troubleshoot a wide variety of electrical projects. Computer programs are integrated into the coursework to allow for practice of circuit calculations, to create working models that simulate real circuit conditions and to support classroom lectures and demonstrations. Of equal importance is the thorough study of the safety rules, protocols, and procedures laid out in the National, Massachusetts and Rhode Island Electrical Codes as well as the OSHA standards for the construction and general industries. Laboratory projects, ranging from elementary breadboard experiments to advanced PLC ladder logic control circuits, provide hands-on experience to develop wiring techniques and to simulate actual job conditions in residential, commercial and industrial environments.

Upon completion of the Associate in Science Degree in Electrical Technology, graduates are qualified to seek employment in entry-level careers in the electrical industry and are qualified to work as an apprentice electrician or technician. Associate degree graduates can also continue in the NEIT Bachelor of Science in Electrical Engineering Technology program.

For those interested in careers in the sustainable renewable energy fields such as solar photovoltaic arrays, wind generation (turbine), tidal generation and fuel cell technologies, an additional quarter specifically addresses these careers as well as the unique techniques and standards students must learn to become competent as environmentally-conscious electricians or technicians. Upon successful completion, ELY students may earn an additional Associate in Science degree in Electrical Technology with a concentration in Renewable Energy Sources. Upon completion of the program, students are eligible to sit for the North American Board of Certified Energy Practitioners (NABCEP) entry level exam.

An additional renewable energy quarter is available for graduates of the Electrical Technology program as well as for non-NEIT students provided certain requirements are met (i.e., electrical licensing, electrical contractor, and electrical engineer).

Electrical Technology
Associate in Science Degree

Quarter I

Course	No.	Course Title	C	L	T
ELT	112	Electrical Foundations I & Lab	5	2	6
ELT	116	Introduction to Residential Wiring/NEC I	3	0	3
ELT	117	Basic Wiring Techniques Lab	0	2	1
MA	*100/110*	*Introduction to College Math (MA/SCI Core)*	*4*	*0*	*4*
			12	4	14

Quarter II

Course	No.	Course Title	C	L	T
ELT	122	Electrical Foundations II & Lab	6	2	7
ELT	126	Residential Wiring/NEC II	1	0	1
ELT	127	Residential Wiring Lab II	0	4	2
MA	*125*	*Technical Math I (MA/SCI Core)*	*4*	*0*	*4*
		CHOOSE ONE *(depending upon English placement)*			
EN	*101*	*Introduction to Writing and Workplace Communication (COM Core)*	*4*	*0*	*4*
-or-					
EN	*102*	*Critical Thinking and College Writing (COM Core)*			
			15	6	18

Quarter III

Course	No.	Course Title	C	L	T
ELT	132	Transformers & Lab	2	2	3
ELT	134	OSHA Construction Safety & Health	1.5	0	1
ELT	136	Advanced Wiring/NEC III	4	0	4
ELT	137	Advanced Wiring III Lab	0	4	2
MA	*210*	*Technical Math II (MA/SCI Core)*	*4*	*0*	*4*
		CHOOSE ONE *(depending upon Quarter II)*			
EN	*102*	*Critical Thinking and College Writing (COM Core)*	*4*	*0*	*4*
-or-					
ELECTIVE		*Communications Core*			
			15.5	6	18

Quarter IV

Course	No.	Course Title	C	L	T
ELT	212	Motor Theory	4	0	4
ELT	215	Motor Controls & Lab	1	8	5
ELT	217	AutoCAD Electrical	1	2	2
PHY	*200*	*Physics I & Lab (MA/SCI Core)*	*3*	*2*	*4*
			9	12	15

Quarter V

Course	No.	Course Title	C	L	T
ELT	222	Industrial Controls	6	0	6
ELT	223	Industrial Controls Lab	0	6	3
ELT	226	Introduction to Programmable Logic Controllers & Lab	2	2	3
PS	*210*	*Human Relations in the Workplace (SS Core)*	*4*	*0*	*4*
			12	8	16

Quarter VI

Course	No.	Course Title	C	L	T
ELT	232	Electronic Motor Drive Systems	5	0	5
ELT	233	Advanced Industrial Controls Lab	0	4	2
ELT	236	Advanced Programmable Logic Controllers & Lab	2	6	5
ELECTIVE		*Humanities Core*	*4*	*0*	*4*
			11	10	16

Total Quarter Credit Hours = 97 for ELY AS

ELECTRICAL TECHNOLOGY WITH RENEWABLE ENERGY*
One Additional Quarter

Quarter VII

Course	No.	Course Title	C	L	T
ELT	280	Photovoltaic Systems & Lab	4	4	6
ELT	290	Wind Turbine Technology & Other Renewable Energy Sources	4	0	4
SCI	*110*	*Environmental Science (MA/SCI Core)*	*4*	*0*	*4*
			12	4	14

Total Quarter Credit Hours = 111 for ELY RE AS

Legend

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PLEASE NOTE: All liberal arts core courses are listed in italics.

All associate degree students are required to take 32 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses. Students who place out of EN 101, EN 102 or MA 100/110 must still take 32 credits of core courses.

*Students in Electrical Technology who wish to take Electrical Technology with Renewable Energy (ELRE) must have achieved a cumulative grade point average of 2.50 throughout the program and hold their OSHA card prior to entering the seventh (ELRE) quarter of the program.

Associate in Science Degree

The Associate in Science in Electronic Medical Records program prepares technicians to maintain, collect, and analyze patients' health information data including medical history, symptoms, examinations results, diagnostic tests, treatment methods, and all other healthcare provider services. Technicians ensure the quality, accuracy, accessibility, and security of health information data. They regularly communicate with physicians and other healthcare professionals to clarify diagnoses or to obtain additional information. Health information technicians should possess excellent oral and written communication skills as they often serve as liaisons between healthcare facilities, insurance companies, and other establishments.

The Electronic Medical Records curriculum combines elements of healthcare, business, and information technology. Coursework involves medical terminology, anatomy and physiology, health data requirements and standards, clinical classification and coding systems, data analysis, healthcare reimbursement methods, database security and management, confidentiality of personal health information, and quality improvement methods. Students will be trained on electronic health records software applications to maintain data on patient safety, patterns of disease, disease treatment, and outcomes for biomedical statistics.

Health information technicians' duties vary with the size and scope of the medical facility. Technicians specialize in many aspects of health information and can work in physicians' offices, nursing care facilities, outpatient care centers, home healthcare services, hospitals, managed care organizations, government agencies, behavioral health facilities, and insurance companies.

Upon successful completion of the entire course of study, graduates may sit for the Certified Electronic Health Record Specialist (CEHRS) examination administered by the National Healthcareer Association and the more advanced Certified Professional in Electronic Health Records (CPEHR) examination administered by Health IT Certification. In addition, after completing certain prerequisites*, graduates of this program are eligible to continue on for a Bachelor of Science Degree in Business Management.

Electronic Medical Records
Associate in Science Degree

Quarter I

Course	No.	Course Title	C	L	T
HS	102	Introduction to Allied Health	2	0	2
MGM	112	Introduction to Office Software	2	2	3
IT	111	Introduction to Information Technology	2	2	3
		CHOOSE ONE *(depending upon English placement)*			
EN	*101*	*Introduction to Writing and Workplace Communication (COM Core)*	*4*	*0*	*4*
-or-					
EN	*102*	*Critical Thinking and College Writing (COM Core)*			
		CHOOSE ONE *(depending upon Math placement)*			
MA	*100/110*	*Introduction to College Math (MA/SCI Core)*	*4*	*0*	*4*
-or-					
ELECTIVE		*Math/Science Core*			
			14	4	16

Quarter II

Course	No.	Course Title	C	L	T
BIO	100	Anatomy & Physiology I	4	0	4
CMA	121	Medical Language II	3	0	3
HIM	120	HIPAA and Patient Confidentiality	2	0	2
HIM	122	Introduction to Electronic Health Records	2	4	4
		CHOOSE ONE *(depending upon English placement)*			
EN	*102*	*Critical Thinking and College Writing (COM Core)*	*4*	*0*	*4*
-or-					
ELECTIVE		*Communications Core*			
			15	4	17

Quarter III

Course	No.	Course Title	C	L	T
CMA	131	Medical Language III	2	0	2
CMA	220	The Electronic Medical Record	2	2	3
MGM	143	Business Communication	1	4	3
BIO	*120*	*Anatomy & Physiology II*	*4*	*0*	*4*
PS	*202*	*Psychology of Healthcare (SS Core)*	*4*	*0*	*4*
			13	6	16

Quarter IV

Course	No.	Course Title	C	L	T
CMA	228	Comprehensive Medical Office Practice I (weeks 1-5)**	1	4	3
CMA	229	Comprehensive Medical Office Practice II (weeks 6-10)**	1	4	3
MGM	131	Introduction to Business Analysis and Reporting	1	4	3
ELECTIVE		*Math/Science Core*	*4*	*0*	*4*
			7	12	13

Quarter V

Course	No.	Course Title	C	L	T
CMA	126	Clinical Documents and Communications	0	2	1
IT	265	Introduction to Information Security	2	2	3
MGM	231	Databases & Data Analysis	1	4	3
HIM	250	Comprehensive Health Information Management I	4	0	4
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	*4*	*0*	*4*
			11	8	15

Quarter VI

Course	No.	Course Title	C	L	T
MGM	105	Effective Teams and Projects	2	2	3
HIM	260	Comprehensive Health Information Management II	4	0	4
HIM	262	Internship	0	10	2
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	*4*	*0*	*4*
PS	*210*	*Human Relations in the Workplace (SS Core)*	*4*	*0*	*4*
			14	12	17

Total Quarter Credit Hours = 94

Legend

C = Number of lecture hours per week
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PLEASE NOTE: All liberal arts core courses are listed in italics.

All associate degree students are required to take 32 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses. Students who place out of EN 101, EN 102 or MA 100/110 must still take 32 credits of core courses.

**Note that because these courses run for 5 weeks, the lecture and lab times shown are doubled. For example, a 1 lecture hour and 2 laboratory hour course requires 2 lecture hours and 4 laboratory hours for each of the five weeks.

*Students considering a Bachelor of Science Degree in Business Management need to take Effective Teams and Projects (MGM 105), Accounting Fundamentals (MGM 130), Introduction to Business Analysis and Reporting (MGM 131), Small Business and the Law (BU 236), and Applied Math for Business (MA 200) or Technical Math I (MA 125) or their equivalents either during their associate degree program or during a prerequisite quarter. See your student advisor to schedule

Associate in Science Degree

The associate in science degree in Electronic Systems Engineering Technology provides training in one of the most fundamental and important fields in technology today. The first five quarters provide a core foundation of knowledge in electronics and electronic systems. During the last quarter, students focus on one of two directions: continuing on toward NEIT's bachelor's degree in Electrical Engineering Technology or entering the workplace after earning an associate degree. The associate degree program is designed to give students entering the field of electronics a sound, comprehensive foundation in the skills employers are seeking in an electronics technician. Beginning with electronic foundation core courses and culminating in electronic systems, the curriculum provides the knowledge required to succeed in this modern high-tech field.

Laboratory projects have been developed to provide hands-on experience and to simulate actual job conditions. The lab projects are highlighted in courses such as telecommunications, digital electronics, data and acquisition control, microprocessor control, programmable logic control (PLC) and robotic control systems. Students also have two to three technical elective choices in areas such as Renewable Energy Systems, networking, CAD, and Biomedical Systems.

Graduates of this program are qualified to seek entry-level employment in a number of challenging areas such as research and development, product design, product testing, field service, manufacturing of complex electronic assemblies and systems, installation, marketing, and customer service. Associate degree graduates can also continue in the NEIT Bachelor of Science in Electrical Engineering Technology program.

Electronic Systems Engineering Technology
Associate in Science Degree

Quarter I

Course	No.	Course Title	C	L	T
EST	110	Electrical Circuit Theory I	3	2	4
EST	111	Instruments and Basic Circuit Construction	3	2	4
EST	112	Introduction to Engineering Technology	2	0	2
		CHOOSE ONE *(depending upon Math placement)*			
MA	*100/110*	*Introduction to College Math (MA/SCI Core)*	*4*	*0*	*4*
-or-					
ELECTIVE		*Social Sciences Core*			
		CHOOSE ONE *(depending upon English placement)*			
EN	*101*	*Introduction to Writing and Workplace Communication (COM Core)*	*4*	*0*	*4*
-or-					
EN	*102*	*Critical Thinking and College Writing (COM Core)*			
			16	4	18

Quarter II

Course	No.	Course Title	C	L	T
EST	120	Electrical Circuit Theory II & Lab	4	2	5
EST	131	Semiconductor Technology	4	2	5
MA	125	Technical Math I (MA/SCI Core)	4	0	4
		CHOOSE ONE *(depending upon Quarter I)*			
EN	*102*	*Critical Thinking and College Writing (COM Core)*	*4*	*0*	*4*
-or-					
ELECTIVE		*Communications Core*			
			16	4	18

Quarter III

Course	No.	Course Title	C	L	T
EST	126	Digital Logic Systems I	2	2	3
EST	138	Linear Integrated Circuits	3	2	4
EST	167	Robotic Control Systems	3	2	4
MA	*210*	*Technical Math II (MA/SCI Core)*	*4*	*0*	*4*
			12	6	15

Quarter IV

Course	No.	Course Title	C	L	T
EST	226	Digital Logic Systems II	2	2	3
EST	236	Microprocessor Control Systems	4	2	5
EST	242	Industrial Systems	3	2	4
PS	*210*	*Human Relations in the Workplace (SS Core)*	*4*	*0*	*4*
			13	6	16

Quarter V

Course	No.	Course Title	C	L	T
EST	250	Telecommunications Systems	3	2	4
EST	254	Introduction to Programmable Controller (PLC) Systems	3	2	4
ELECTIVE		Technical Elective	2-4	2/4	3-5
PHY	*200*	*Physics I & Lab (MA/SCI Core)*	*3*	*2*	*4*
			11/13	8-10	15-17

Quarter VI

Course	No.	Course Title	C	L	T
EST	258	Printed Circuit Board Design	3	2	4
ELT	217	AutoCAD Electrical	1	2	2
ELECTIVE		Technical Elective	2-4	2/4	3-5
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	*4*	*0*	*4*
			10/12	6/8	13-15

Technical Electives

Course	No.	Course Title	C	L	T
EST	246	Data Acquisition Systems	2	2	3
EST	255	Renewable Energy Systems	2	2	3
EST	260	Biomedical Systems	2	2	3
MCT	115	Computer Aided Design I	3	2	4
NE	115	Computer and Networking Fundamentals	2	2	3
NE	121	Windows Networking Essentials	2	4	4
NE	268	Wireless Networks	2	2	3

Total Contact Hours = 1120
Total Quarter Credit Hours = 95-99

Legend

C = Number of lecture hours per week
L = Number of laboratory hours per week
T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one credit depending on the expected amount of pre- or post-lab work.

PLEASE NOTE: All liberal arts core courses are listed in italics.

All associate degree students are required to take 32 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses. Students who place out of EN 101, EN 102 or MA 100/110 must still take 32 credits of core courses.

Bachelor of Science Degree

The Bachelor of Science in Game Development and Simulation Programming Technology will prepare students for careers in game programming and software engineering. The program builds on the foundations laid in the associate degree program with emphasis placed on acquiring the technical skills necessary to implement games on a variety of platforms including phones, handheld devices, and XBox.

Through studying and applying key principles of software design as well as specific game algorithms and techniques, students will learn to design and implement games of increasing size and complexity. Class work is centered on developing games in small teams, an approach which allows students to acquire both the technical and interpersonal skills necessary for the game and simulation industry.

A key feature of the program is the senior capstone project where students will bring together knowledge gained throughout the program. Under the supervision of a faculty member, students in teams of two to four will design and develop a game over a period of six months. The project work will be evaluated by a team of three faculty members.

Graduates from this program will be eligible for positions such as game designer, level designer, game developer, quality assurance engineer, software engineer, and game programmer.

Game Development and Simulation Programming
Bachelor of Science Degree

Quarter VII

Course	No.	Course Title	C	L	T
GDS	373	Advanced Algorithms and API	2	4	4
GDS	375	Simulation and Serious Games	2	2	3
GDS	383	Console Game Programming I	2	4	4
MA	*310*	*Calculus (MA/SCI Core)*	*4*	*0*	*4*
			10	10	15

Quarter VIII

Course	No.	Course Title	C	L	T
GDS	370	Advanced Game Design	2	2	3
GDS	371	Tools and Engine Development	2	4	4
GDS	381	Software Testing and Quality Assurance	2	2	3
EN	*331*	*Research Writing (COM Core)*	*4*	*0*	*4*
			10	8	14

Quarter IX

Course	No.	Course Title	C	L	T
SE	393	Design Patterns	3	4	5
GDS	399	Console Game Programming II	2	4	4
MA	315	Math for Game Developers (MA/SCI Core)	4	0	4
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	*4*	*0*	*4*
			13	8	17

Quarter X

Course	No.	Course Title	C	L	T
GDS	402	Level Design and Gameplay Development	2	2	3
GDS	404	Artificial Intelligence	2	4	4
GDS	405	Console Game Programming III	2	4	4
EN	*421*	*Technical Communications (COM Core)*	*4*	*0*	*4*
			10	10	15

Quarter XI

Course	No.	Course Title	C	L	T
SE	408	Programming Mobile Devices	2	4	4
GDS	410	Introduction to Senior Project	2	6	5
GDS	413	Advanced Portfolio Development	1	0	1
ELECTIVE		*Humanities, Social Sciences, or Arts/Foreign Language Core*	*4*	*0*	*4*
			9	10	14

OR Quarter XI

Course	No.	Course Title	C	L	T
GDS	410	Introduction to Senior Project	2	6	5
IT	415	Cooperative Learning I	0	18	6
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	*4*	*0*	*4*
			6	24	15

Quarter XII

Course	No.	Course Title	C	L	T
GDS	420	Senior Project	2	8	6
GDS	422	Emerging Technologies in Game Development	2	4	4
ELECTIVE		*Social Sciences Core*	*4*	*0*	*4*
			8	12	14

OR Quarter XII

Course	No.	Course Title	C	L	T
GDS	420	Senior Project	2	8	6
IT	425	Cooperative Learning II	0	21	7
ELECTIVE		*Social Sciences Core*	*4*	*0*	*4*
			6	29	17

Total Quarter Credit Hours = 89/93

Legend
C = Number of lecture hours per week
L = Number of laboratory hours per week
T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one credit depending on the expected amount of pre- or post-lab work.

PLEASE NOTE: All liberal arts core courses are listed in italics.

All bachelor degree students are required to take 28 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses.

Associate in Science Degree

The Graphics, Multimedia and Web Design associate degree program prepares students for entry-level positions in a variety of graphics and multimedia production environments. The key goal of visual creativity is central to all of the technological coursework, and each student will design and produce a personal "brand" to package and promote their online portfolios.

Starting with the core skills of digital photography, design, and computer graphics, students receive hands-on, project-oriented instruction in web design, graphic design, e-publishing, interactive multimedia, and branding. A wide variety of Adobe and other industry standard software is used.

Upon completion of the Associate in Science Degree in Graphics, Multimedia and Web Design, students will have the opportunity to matriculate to the Bachelor of Science Degree in Graphics, Multimedia and Web Design.

Graphics, Multimedia and Web Design
Associate in Science Degree

Quarter I

Course	No.	Course Title	C	L	T
GMW	100	Digital Photography I	2	4	4
GMW	112	Digital Graphics I	2	2	3
GMW	123	Design I	2	2	3
		CHOOSE ONE *(depending upon English placement)*			
EN	101	*Introduction to Writing and Workplace Communication (COM Core)*	4	0	4
-or-					
EN	102	*Critical Thinking and College Writing (COM Core)*			
			10	8	14

Quarter II

Course	No.	Course Title	C	L	T
GMW	110	Introduction to Web Design	2	4	4
GMW	205	Digital Photography II	2	4	4
GMW	223	Design II	2	2	3
AR	203	*Introduction to Drawing (HU or AR/FL Core)*	4	0	4
		CHOOSE ONE *(depending upon Quarter I)*			
EN	102	*Critical Thinking and College Writing (COM Core)*	4	0	4
-or-					
EN	211	*Oral Communications (COM Core)*			
			14	8	18

Quarter III

Course	No.	Course Title	C	L	T
GMW	102	Digital Illustration	2	2	3
GMW	122	HTML	2	2	3
GMW	201	Intro to Typography	2	2	3
		CHOOSE ONE *(depending upon Math placement)*			
MA	100/110	Introduction to College Math (MA/SCI Core)	4	0	4
-or-					
ELECTIVE		*Math/Science Core*			
		CHOOSE ONE			
EN	211	*Oral Communications (COM Core)*	4	0	4
-or-					
ELECTIVE		*Communications Core*			
			14	6	17

Quarter IV

Course	No.	Course Title	C	L	T
GMW	141	Design III	2	2	3
GMW	212	Digital Graphics II	2	2	3
GMW	231	Digital Publishing I	2	4	4
MA	121	*Business Math (MA/SCI Core)*	4	0	4
SO	220	*Internet and Society*	4	0	4
			14	8	18

Quarter V

Course	No.	Course Title	C	L	T
GMW	129	Project Planning and Estimating	2	2	3
GMW	220	UI/UX Design	2	2	3
GMW	232	Digital Publishing II	2	4	4
GMW	233	Package Design I	2	2	3
HU	240	*Modern Art and Design (HU or AR/FL Core)*	4	0	4
			12	10	17

Quarter VI

Course	No.	Course Title	C	L	T
GMW	215	Web Content Management with WordPress	4	2	5
GMW	272	Associate Portfolio	2	2	3
ELECTIVE		*Social Sciences Core*	4	0	4
		CHOOSE ONE			
GMW	251	Special Topics: GMW*	2	2	3
-or-					
GMW	280	Cooperative Work Experience*	0	15	3
			10/12	6/19	15

Total Quarter Credit Hours = 99

PLEASE NOTE: All core courses are listed in italics.

All associate degree students are required to take 32 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses. Students who place out of EN 101, EN 102 or MA 100/110 must still take 32 credits of core courses.

*Students who intend to continue on to the GMW Bachelor's program must take GMW 251 in preparation for the bachelor curriculum.

This program requires EN 101, EN 102, HU 203 and 3 Humanities/Social Sciences electives for the associate degree track. If a student places out of EN 101 the number of Humanities/Social Sciences electives goes up by one.

Bachelor of Science Degree

Graphics, Multimedia and Web Design (GMW) students combine their imagination and an eye for design with interactive computer graphics. Students produce visually creative, marketing-driven products deliverable for both desktop and mobile devices.

Building upon the core design and technical skills developed in the associate degree program, the Graphics, Multimedia and Web Design bachelor's degree program further prepares students for positions in a wide variety of emerging new media careers. Students will develop interdisciplinary skills combining web content management systems, e-publishing, branding, logo design, packaging design, search engine optimization, web video, animation, and social media marketing. Cross-media delivery via ePub and mobile devices will be emphasized. Creative content development, media literacy, marketing, writing, and UI/UX design, will support each student's "branded" portfolio and personalized career path.

The dynamic combination of skills obtained in the Bachelor of Science Degree in Graphics, Multimedia and Web Design can be employed in a wide variety of fields, including advertising and promotion, public relations, packaging design, web design, content management systems, e-publishing, social media, and other visually creative career paths.

Graphics, Multimedia and Web Design
Bachelor of Science Degree

Quarter VII

Course	No.	Course Title	C	L	T
GMW	300	Web Animation	2	4	4
GMW	301	3D Modeling	2	4	4
GMW	302	Concept Development	2	2	3
EN	*331*	*Research Writing (COM Core)*	*4*	*0*	*4*
			10	10	15

Quarter VIII

Course	No.	Course Title	C	L	T
GMW	310	Digital Editing I	2	4	4
GMW	311	Motion Graphics I	2	4	4
GMW	312	Motion Graphics Design	2	2	3
ELECTIVE		*Social Sciences Core*	*4*	*0*	*4*
			10	10	15

Quarter IX

Course	No.	Course Title	C	L	T
GMW	320	Digital Editing II	2	2	3
GMW	321	Motion Graphics II	2	4	4
GMW	322	Typography II	2	2	3
EN	*421*	*Technical Communications (COM Core)*	*4*	*0*	*4*
			10	8	14

Quarter X

Course	No.	Course Title	C	L	T
GMW	400	Digital Publishing III	2	4	4
GMW	401	Brand Strategy and Marketing	2	2	3
GMW	402	Package Design II	2	2	3
ELECTIVE		*Math/Science Core*	*4*	*0*	*4*
			10	8	14

Quarter XI

Course	No.	Course Title	C	L	T
GMW	410	Responsive Web Design Technology	3	1	4
GMW	411	Project Management	2	2	3
GMW	412	Social Media Marketing	2	2	3
ELECTIVE		*Math/Science Core*	*4*	*0*	*4*
ELECTIVE		*Humanities Core*	*4*	*0*	*4*
			15	5	18

Quarter XII

Course	No.	Course Title	C	L	T
GMW	420	Content Management Systems II	4	2	5
GMW	421	Senior Portfolio	2	2	3
GMW	422	Special Topics or Coop Experience	3	1	4
ELECTIVE		*Humanities, Social Sciences, or Arts/Foreign Language Core*	*4*	*0*	*4*
			13	5	16

Total Quarter Credit Hours = 92

Legend

C = Number of lecture hours per week
L = Number of laboratory hours per week
T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one credit depending on the expected amount of pre- or post-lab work.

PLEASE NOTE: All liberal arts core courses are listed in italics.

All bachelor degree students are required to take 28 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses.

Associate in Science Degree

The Information Technology Department offers an associate in science degree in Information Technology, the field that has become the backbone of business, technology and industry. The department has an extensive set of computer labs for student use to gain hands-on experience in all areas of the field, from programming to software applications to network management and administration.

The emphasis of this program is on how specific computer applications solve business issues. The analysis and design of systems is covered to expose students to problems that may be expected on the job. Students learn to program in languages in demand in the workplace. Further, students are introduced to current software packages for word processing and database management. Students are also prepared to meet the technical needs of a business office through Microsoft and networking courses that introduce students to LAN administration.

Students select a specialization in either software engineering or network engineering. The software engineering concentration provides more depth in business applications, web development and database design. Upon completion of this concentration, students are qualified to apply for positions in software support, programming, web development or a wide range of other entry-level positions or to continue in the NEIT Software Engineering bachelor's degree program.

The network engineering concentration provides a focus in network administration and infrastructure. The network engineering curriculum has been designed to include an understanding of operating systems, the infrastructure that connects computers, and the networks they form. The curriculum provides training in Microsoft Windows networks. The program is completed with the appropriate theory of personal computer configuration and maintenance and repair techniques required to succeed in a dynamically changing workplace. Laboratory projects have been developed to simulate actual workplace scenarios and to provide hands-on troubleshooting experience. Such peripheral devices as laser printers, multimedia kits, fax modems and scanners highlight laboratory projects.

Graduates with a network engineering concentration will be eligible to take such internationally recognized certification exams as Microsoft Certified Professional (MCP) and the A+ Service Technician Certificate. Graduates of this program are qualified to seek entry-level positions such as support technician, operator, Microsoft and network LAN administrator, personal computer technicians,

personal computer field service technicians, support representatives, help desk representatives, and network service technicians. Associate degree graduates can continue in the NEIT Bachelor of Science in Network Engineering program.

CORE CURRICULUM

Quarter I

Course	No.	Course Title	C	L	T
NE	115	Computer and Networking Fundamentals	2	2	3
SE	114	Programming Essentials Using C++	2	4	4
IT	121	IT Visual Communications	2	2	3
		CHOOSE ONE *(depending upon Math placement)**			
MA	100/110	Introduction to College Math (MA/SCI Core)	4	0	4
-or-					
ELECTIVE		Humanities, Social Sciences, or Arts/Foreign Language Core			
			10	8	14

Quarter II

Course	No.	Course Title	C	L	T
SE	111	XHTML/JavaScript	2	4	4
SE	124	Intermediate Programming Using C++*	2	4	4
NE	121	Windows Networking Essentials	2	4	4
		CHOOSE ONE *(depending upon English placement)*			
EN	101	Introduction to Writing and Workplace Communication (COM Core)	4	0	4
-or-					
EN	102	Critical Thinking and College Writing (COM Core)			
			10	12	16

Quarter III

Course	No.	Course Title	C	L	T
NE	131	Networking for Small Businesses	2	2	3
SE	133	Database Management	2	4	4
MGM	115	Effective Management of Teams and Projects	2	2	3
MA	121	Business Math (MA/SCI Core)	4	0	4
		CHOOSE ONE *(depending upon Quarter II)*			
EN	102	Critical Thinking and College Writing (COM Core)	4	0	4
-or-					
ELECTIVE		Communications Core			
			14	8	18

Information Technology
Associate in Science Degree

NETWORK ENGINEERING CONCENTRATION CURRICULUM

Quarter IV

Course	No.	Course Title	C	L	T
NE	244	Desktop OS Troubleshooting	2	2	3
NE	245	Introduction to Networks	2	4	4
NE	247	Windows Server	2	4	4
MA	*125*	*Technical Math I (MA/SCI Core)*	*4*	*0*	*4*
			10	10	15

Quarter V

Course	No.	Course Title	C	L	T
NE	255	Linux Essentials	2	3	3
NE	257	Routing and Switching Essentials	2	4	4
NE	259	Windows Server Lab	0	2	1
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	*4*	*0*	*4*
PHY	*200*	*Physics I & Lab (MA/SCI Core)*	*3*	*2*	*4*
			11	10	16

Quarter VI

Course	No.	Course Title	C	L	T
NE	265	AS Capstone Project	3	2	4
NE	267	Introduction to Information Security	2	2	3
ELECTIVE		*Social Sciences Core*	*4*	*0*	*4*
		CHOOSE ONE			
IT	260	Internship	0	15	3
		Technical Electives	3	0	3
IT	267	IT Ethics and Professional Development	3	0	3
EST	236	Microprocessor Control Systems	4	2	5
MGM	214	Marketing Communications	2	2	3
MGM	264	Sales and Service Management	2	2	3
NE	268	Wireless Networks	2	2	3
			9-13	4-19	14-16

Total Quarter Credit Hours = 93-95

SOFTWARE ENGINEERING CONCENTRATION CURRICULUM

Quarter IV

Course	No.	Title	C	L	T
SE	245	C#	2	4	4
SE	252	Systems Analysis and Design	2	2	3
SE	266	Web Development Using PHP and MySQL	2	4	4
MA	*125*	*Technical Math I (MA/SCI Core)*	*4*	*0*	*4*
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	*4*	*0*	*4*
			14	10	19

Quarter V

Course	No.	Title	C	L	T
SE	251	Advanced JavaScript	2	4	4
SE	255	Advanced C#	2	4	4
SE	256	Web Development Using .NET	2	4	4
PHY	*200*	*Physics I (MA/SCI Core)*	*3*	*2*	*4*
			9	14	16

Quarter VI

Course	No.	Title	C	L	T
SE	264	User Interface Design	2	2	3
SE	265	AS Capstone Project	0	6	3
ELECTIVE		*Social Sciences Core*	*4*	*0*	*4*
		CHOOSE ONE			
IT	260	Internship	0	15	3
-or-		Technical Electives			
IT	267	IT Ethics and Professional Development	3	0	3
EST	236	Microprocessor Control Systems	4	2	5
MGM	214	Marketing Communications	2	2	3
MGM	264	Sales and Service Management	2	2	3
NE	268	Wireless Networks	2	2	3
			6-10	8-23	13-15

Total Quarter Credit Hours = 96/98

Legend

C = Number of lecture hours per week

L = Number of laboratory hours per week

T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one credit depending on the expected amount of pre- or post-lab work.

PLEASE NOTE: All liberal arts core courses are listed in italics.

All associate degree students are required to take 32 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses. Students who place out of EN 101, EN 102 or MA 100/110 must still take 32 credits of core courses.

*A grade of C or better in MA 100/110 Introduction to College Math is required before taking SE 124 Intermediate Programming Using C++.

Bachelor of Science Degree

The Information Technology Department offers three concentrations as part of the Bachelor of Science in Information Technology: Software Engineering, Network Engineering, and Cyber Security.

A key feature of these programs is the choice between the senior project and the cooperative learning experience in the final two quarters. In the senior project, each student works with a faculty member to develop and present a project that focuses in depth on a particular topic and allows students to bring together knowledge gained throughout the program.

The cooperative learning experience, based on industry demand and with the approval of the IT Department Chair, may be available during the final two quarters of the program. These experiences, which may be paid or unpaid, allow students to receive college credit and to work off campus in an organization where they will practice and enhance their technical skills. Typically, and when available, students will work in the same organization for the final two quarters of the bachelor's degree program.

Cyber Security

The Cyber Security program is designed to prepare students for a career in the network security industry. The bachelor of science degree is ideal for students who already possess an Associate in Science degree in Network Engineering or related discipline. The curriculum includes core topics in the realm of cyber security, such as: computer systems, mobile and network forensics, Windows and Linux security and incident response.

Students will learn best practices for the design of secure modern networks as well as how to secure existing computers and networks. Students will learn about evolving threats and the proper use of specific security tools. Both security theory and hands-on practice are stressed.

With a bachelor's degree in Cyber Security students can compete for positions like: systems operations and maintenance professional, network security specialist, digital forensics and incident response specialist and vulnerability analyst. Positions in law enforcement will also be attainable. While the emphasis of the program is on network security, graduates are qualified for positions advertised as network administrators, network engineers and network analysts.

CYBER SECURITY CURRICULUM

Quarter VII

Course	No.	Course Title	C	L	T
NE	371	Network Scripting	2	2	3
CYB	371	Digital Forensics	2	4	4
NE	406	Router Security and Firewall Management	2	2	3
EN	331	Research Writing (COM Core)	4	0	4
			10	8	14

Quarter VIII

Course	No.	Course Title	C	L	T
NE	381	Design and Implementation of an Active Directory Network	2	4	4
NE	402	Linux System Administration	4	4	6
MA	210	Technical Math II (MA/SCI Core)	4	0	4
ELECTIVE		Humanities (or Arts/Foreign Language) Core	4	0	4
			14	8	18

Information Technology
Bachelor of Science Degree

Quarter IX

Course	No.	Course Title	C	L	T
CYB	392	Mobile Forensics	2	4	4
CYB	394	Windows Security	2	4	4
NE	395	Internet Servers	3	2	4
ELECTIVE		Communications Core	4	0	4
			11	10	16

Quarter X

Course	No.	Course Title	C	L	T
CYB	373	Penetration Testing	2	2	3
CYB	408	Linux Security	2	4	4
CYB	409	Web Application Security	2	2	3
		CHOOSE ONE			
MA	310	Calculus (MA/SCI Core)	4	0	4
-or-					
MA	300	Statistics (MA/SCI Core)			
-or-					
ELECTIVE		Math/Science Core			
			10	8	14

Quarter XI

Course	No.	Course Title	C	L	T
NE	407	Virtualization	2	2	3
CYB	410	Introduction to Senior Project	3	0	3
CYB	412	Network Security	2	4	4
ELECTIVE		Social Sciences Core	4	0	4
			11	6	14

OR Quarter XI

Course	No.	Course Title	C	L	T
CYB	410	Introduction to Senior Project	3	0	3
IT	415	Cooperative Learning I*	0	18	6
ELECTIVE		Social Sciences Core	4	0	4
			7	18	13

Quarter XII

Course	No.	Course Title	C	L	T
CYB	423	Incident Response	2	2	3
CYB	424	Senior Project	0	6	3
CJ	404	Digital Forensics Investigations and Applications	4	0	4
ELECTIVE		Humanities (or Arts/Foreign Language) Core	4	0	4
			10	8	14

OR Quarter XII

Course	No.	Course Title	C	L	T
CYB	424	Senior Project	0	6	3
IT	425	Cooperative Learning II*	0	21	7
ELECTIVE		Humanities (or Arts/Foreign Language) Core	4	0	4
			4	27	14

Total Quarter Credit Hours = 89/90

Network Engineering

The Bachelor of Science Degree in Network Engineering continues on the base built during the associate degree to give the student more extensive experience in the management of Local Area Networks (LANs), intranets, Wide Area Networks (WANs) and exposure to configuring and managing web servers.

Upon completion of this program, graduates are eligible to apply for positions as network security specialists, LAN managers, network administrators, network engineers and network analysts.

Graduates of this program will be eligible to take such internationally recognized certification exams as the CompTIA Security+ and Network+ exams, the Cisco Certified Network Associate Certification (CCNA), and the Microsoft Certified System Administrator (MCSA).

NETWORK ENGINEERING CURRICULUM

Quarter VII

Course	No.	Course Title	C	L	T
NE	371	Network Scripting	2	2	3
IT	378	Database Management	2	4	4
NE	406	Router Security and Firewall Management	2	2	3
EN	331	Research Writing (COM Core)	4	0	4
			10	8	14

Quarter VIII

Course	No.	Course Title	C	L	T
NE	381	Design and Implementation of an Active Directory Network	2	4	4
NE	402	Linux System Administration	4	4	6
MA	210	Technical Math II (MA/SCI Core)	4	0	4
ELECTIVE		Humanities (or Arts/Foreign Language) Core	4	0	4
			14	8	18

Quarter IX

Course	No.	Course Title	C	L	T
NE	393	WAN Technologies	2	4	4
NE	395	Internet Servers	3	2	4
CYB	394	Windows Security	2	4	4
ELECTIVE		Communications Core	4	0	4
			11	10	16

Quarter X

Course	No.	Course Title	C	L	T
IT	374	IT Project Management	3	0	3
NE	404	Heterogeneous Network Administration	2	2	3
NE	405	Mail Servers	3	2	4
		CHOOSE ONE			
MA	310	Calculus (MA/SCI Core)	4	0	4
-or-					
MA	300	Statistics (MA/SCI Core)			
-or-					
ELECTIVE		Math/Science Core			
			12	4	14

INFORMATION TECHNOLOGY

Quarter XI

Course	No.	Course Title	C	L	T
NE	407	Virtualization	2	2	3
NE	416	Introduction to Network Engineering Senior Project	3	0	3
CYB	412	Network Security	2	4	4
ELECTIVE		*Social Sciences Core*	4	0	4
			11	6	14

OR Quarter XI

Course	No.	Course Title	C	L	T
NE	416	Introduction to Network Engineering Senior Project	3	0	3
IT	415	Cooperative Learning I*	0	18	6
ELECTIVE		*Social Sciences Core*	4	0	4
			7	18	13

Quarter XII

Course	No.	Course Title	C	L	T
CYB	408	Linux Security	2	4	4
CYB	423	Incident Response	2	2	3
NE	425	Network Engineering Senior Project	0	6	3
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	4	0	4
			8	12	14

OR Quarter XII

Course	No.	Course Title	C	L	T
NE	425	Network Engineering Senior Project	0	6	3
IT	425	Cooperative Learning II*	0	21	7
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	4	0	4
			4	27	14

Total Quarter Credit Hours = 89/90

**Information Technology
Bachelor of Science Degree**

Software Engineering

The Bachelor of Science Degree in Software Engineering builds upon the knowledge of the associate degree to give the student a broader exposure to programming languages, especially object-oriented languages, and deeper experience in database design, development and implementation.

Upon completion of this program, graduates will be prepared to apply for positions such as system developer, analyst, programmer, database specialist, software engineer, web programmer, planner or developer.

SOFTWARE ENGINEERING CURRICULUM

Quarter VII

Course	No.	Course Title	C	L	T
SE	396	Advanced PHP Programming	2	4	4
IT	378	Database Management	2	4	4
SE	426	Web Services	3	2	4
EN	331	*Research Writing (COM Core)*	4	0	4
			11	10	16

Quarter VIII

Course	No.	Course Title	C	L	T
SE	381	Test Driven Development	2	4	4
SE	385	Java	2	4	4
SE	407	Advanced .NET	2	4	4
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	4	0	4
			10	12	16

Quarter IX

Course	No.	Course Title	C	L	T
SE	391	Programming Mobile Devices I – Android	2	4	4
SE	394	Algorithms in Software Engineering	2	4	4
SE	398	Advanced SQL	2	2	3
MA	210	*Technical Math II (MA/SCI Core)*	4	0	4
EN	421	*Technical Communications (COM Core)*	4	0	4
			14	10	19

Quarter X

Course	No.	Course Title	C	L	T
IT	374	IT Project Management	3	0	3
SE	402	Design Patterns	2	4	4
SE	409	Programming Mobile Devices II – IOS	2	4	4
MA	300	*Statistics (MA/SCI Core)*	4	0	4
			11	8	15

Quarter XI

Course	No.	Course Title	C	L	T
SE	414	Introduction to Senior Project	3	0	3
SE	417	Software Security	2	2	3
SE	419	Big Data	2	2	3
ELECTIVE		*Social Sciences Core*	4	0	4
			11	4	13

OR Quarter XI

Course	No.	Course Title	C	L	T
SE	414	Introduction to Senior Project	3	0	3
IT	415	Cooperative Learning I*	0	18	6
ELECTIVE		*Social Sciences Core*	4	0	4
			7	18	13

Quarter XII

Course	No.	Course Title	C	L	T
SE	423	Operating Systems	2	4	4
SE	425	Senior Project	0	6	3
SE	429	Data Analytics	2	2	3
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	4	0	4
			8	12	14

OR Quarter XII

Course	No.	Course Title	C	L	T
SE	425	Senior Project	0	6	3
IT	425	Cooperative Learning II*	0	21	7
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	4	0	4
			4	27	14

Total Quarter Credit Hours = 93

Legend

C = Number of lecture hours per week
L = Number of laboratory hours per week
T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one credit depending on the expected amount of pre- or post-lab work.

PLEASE NOTE: All liberal arts core courses are listed in italics.

All bachelor degree students are required to take 28 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses.

*The cooperative learning experience is contingent on industry demand and with the approval of the IT Department Chair, and is available during the final two quarters of the program.

Note: If you had MA 210 in your AS program, you will need to take a MA/SCI Core Elective in its place.

Master of Science Degree

The master's program in Information Technology (MSIT) at New England Institute of Technology is designed for IT professionals who want to advance their technical knowledge in the field, enhanced with the education and experience for management in the IT industry. The program emphasizes the relevance of continuous learning to personal and professional growth through the combination of advanced technical courses and an integrated management core. Students gain a unique understanding of the relationship between IT and business by learning to utilize technology to improve business processes. Employment opportunities may include positions such as project manager, network manager, chief information officer (CIO), chief technical officer (CTO), business analyst, or systems integrator.

The MSIT program is designed to equip the current or aspiring IT manager with the necessary tools to make deliberate decisions that affect the organization's informational needs. The program's mission is built around the components that make up the informational infrastructure: the software applications that support the business processes, the information and data sources used to store the data, the processes used to secure the data, and the network used to access data and applications and the people who design, manage and implement the applications, data and the network.

While the bachelor's program in IT focuses on preparing graduates to secure, design and implement applications, databases and networks, the master's program provides graduates with the ability to analyze business scenarios, anticipate and respond to a continuously changing environment and effectively assign resources to the components that make up the organization's information system.

Information Technology
Master of Science Degree

Quarter I

Course	No.	Course Title	C	L	T
IT	504	IT Finance	4	0	4
IT	532	IT Project Management	4	0	4
			8	0	8

Quarter II

Course	No.	Course Title	C	L	T
IT	512	Network Infrastructure and Design	4	0	4
IT	514	IT Leadership	4	0	4
			8	0	8

Quarter III

Course	No.	Course Title	C	L	T
IT	522	Software Architecture and User Interface Design	4	0	4
IT	524	Information Systems Security	4	0	4
			8	0	8

Quarter IV

Course	No.	Course Title	C	L	T
IT	502	Data Warehousing and Data Analytics	4	0	4
IT	534	Information Technology and the Law	4	0	4
			8	0	8

Quarter V

Course	No.	Course Title	C	L	T
IT	544	Cloud Computing	4	0	4
IT	546	Ethics	4	0	4
			8	0	8

Quarter VI

Course	No.	Course Title	C	L	T
IT	556	Master's Project	5	0	5
			5	0	5

Total Credits = 45

LEGEND

C = Number of lecture hours per week
L = Number of laboratory hours per week
T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one credit depending on the expected amount of pre- or post-lab work.

Associate in Science Degree

The Associate in Science degree in Interior Design is offered through the Department of Design + Architectural Building Technology.

Interior Design is an exciting, sophisticated, and multifaceted profession. It is a process in which creative and technical solutions are applied within a structure to develop a built interior environment which responds to human needs. The practice of interior design requires the designer to understand this process as well as human response to color, light, fabric, texture, and volumetric space.

Interior design is not interior decorating. The sophistication of the interior design profession now requires the practitioner to possess a fundamental knowledge of building science and technology. It is essential that today's designer is able to integrate science and technology into the creative design process.

The Interior Design program at New England Institute of Technology offers a curriculum specifically developed to meet the needs of today's demanding interior design profession. The associate degree curriculum provides students with the fundamental skills to function as a team member in the development of interior design projects. Additional areas of study include space planning, three-dimensional theory, building systems, and construction methods. The program is also designed to instill within students a sense of professionalism and social responsibility.

Students are introduced to the basic elements and theories of design, color and spatial composition that form the foundation of creative design. They are also, through specific courses, introduced to both manual and computer-aided drafting (CAD) skills. Theory and technical courses will familiarize students with the fundamentals of interior design including the design attributes of materials, textiles, building codes, and building systems. Studio courses require students to incorporate the learned theoretical and technical knowledge into a comprehensive design based upon specific program requirements. Studio project types include residential, office, and retail.

Upon successful completion of the associate degree program, students can continue into the NEIT Bachelor of Science in Interior Design degree program.

Interior Design
Associate in Science Degree

Quarter I

Course	No.	Course Title	C	L	T
ABT	110	Introduction to Architecture and Building Technology	1	0	1
ABT	112	Technical Drafting and Graphic Communications	2	2	3
ABT	114	Introduction to Computer- Aided Drafting (CAD)	2	4	4
ABT	115	Introduction to Structures	2	0	2
		CHOOSE ONE *(depending upon Math placement)*			
MA	*100/110*	*Introduction to College Math (MA/SCI Core)*	*4*	*0*	*4*
-or-					
ELECTIVE		*Humanities, Social Sciences, or Arts/Foreign Language Core*			
		CHOOSE ONE *(depending upon English placement)*			
EN	*101*	*Introduction to Writing and Workplace Communication (COM Core)*	*4*	*0*	*4*
-or-					
EN	*102*	*Critical Thinking and College Writing (COM Core)*			
			15	6	18

Quarter II

Course	No.	Course Title	C	L	T
ID	121	Interior Building Systems	2	2	3
ABT	122	Two- & Three-Dimensional Design Theory	3	0	3
ABT	124	Construction Methods & Materials	3	0	3
HI	235	Architectural History (SS Core)	4	0	4
MA	*125*	*Technical Math I (MA/SCI Core)*	*4*	*0*	*4*
			16	2	17

Quarter III

Course	No.	Course Title	C	L	T
ID	132	Interior Design Studio I – Residential	2	6	5
ID	134	Color and Composition	3	0	3
ABT	211	Presentation Techniques	1	2	2
		CHOOSE ONE *(depending upon Quarter I)*			
EN	*102*	*Critical Thinking and College Writing (COM Core)*	*4*	*0*	*4*
-or-					
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*			
			10	8	14

Quarter IV

Course	No.	Course Title	C	L	T
ABT	137	Introduction to Environmental Systems	3	0	3
ID	212	Programming	2	0	2
ABT	218	Building Information Modeling I (BIM I)	2	4	4
EN	*211*	*Oral Communications (COM Core)*	*4*	*0*	*4*
PHY	*200*	*Physics I & Lab (MA/SCI Core)*	*3*	*2*	*4*
			14	6	17

Quarter V

Course	No.	Course Title	C	L	T
ID	225	History of Interior Design I	3	0	3
ID	226	Finishes & Materials I	3	0	3
ID	228	Interior Design Studio II – Retail	2	6	5
ABT	236	Building Codes	2	0	2
MA	*210*	*Technical Math II (MA/SCI Core)*	*4*	*0*	*4*
			14	6	17

Quarter VI

Course	No.	Course Title	C	L	T
ID	232	Professional Practice for Interior Designers	3	0	3
ID	233	Computer Graphics & Applications	3	0	3
ID	234	Portfolio Review	1	0	1
ID	235	Interior Design Studio III – Office	2	6	5
ELECTIVE		*Humanities Core*	*4*	*0*	*4*
			13	6	16

Total Quarter Credit Hours = 99

Legend

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T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one credit depending on the expected amount of pre- or post-lab work.

PLEASE NOTE: All liberal arts core courses are listed in italics.

All associate degree students are required to take 32 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses. Students who place out of EN 101, EN 102 or MA 100/110 must still take 32 credits of core courses.

Bachelor of Science Degree

The Bachelor of Science degree in Interior Design is offered through the Department of Design + Architectural Building Technology.

The role of the Interior Designer in the building process is expanding. The interior design profession now requires the practitioner or design team manager to possess an advanced knowledge of building science and technology. It is essential that today's designer is able to integrate the advances in building science and technology into the creative design process.

The Interior Design degree program at New England Institute of Technology offers a curriculum specifically developed to meet the needs of today's demanding interior design profession. The Bachelor of Science degree in Interior Design allows students to build upon the fundamentals learned in the associate degree program and expand their knowledge base of design and building science. Students study advanced concepts of interior design and building science through a unique combination of theoretical and practical courses and design studios. These courses cover advanced topics including finishes and materials, textiles, history, estimating and scheduling, contracts and specifications, construction law, acoustics and lighting, and interior construction documentation. The studio courses allow students to incorporate their learned knowledge and skills in a practical application. Studio project types include space planning, hospitality, commercial, and institutional.

A unique component of the Interior Design bachelor's degree is the common core courses shared with the architecture and construction management curriculums. These common courses provide the interior design student with the essential knowledge of building science and technological skills which are crucial in today's interior design profession. This cross-curricular approach to interior design creates graduates uniquely qualified to succeed in today's demanding design profession.

As in the Associate in Science degree in Interior Design, the program strives to instill within each student an awareness of and desire to contribute to the profession and society at large through the development of a professional personal ethic that demands technically, environmentally, and socially responsible decision making. The bachelor's curriculum culminates with a senior thesis project in which students must demonstrate competency and understanding of the technical and design concepts developed throughout their NEIT experience.

Interior Design
Bachelor of Science Degree

Quarter VII

Course	No.	Course Title	C	L	T
ID	313	Finishes & Materials II	3	0	3
ID	314	History of Interior Design II	3	0	3
ID	315	Interior Construction Documents	2	2	3
ABT	337	Building Information Modeling II (BIM II)	2	4	4
EN	*331*	*Research Writing (COM Core)*	*4*	*0*	*4*
			14	6	17

Quarter VIII

Course	No.	Course Title	C	L	T
ID	320	Interior Design Studio IV – Space Planning	2	6	5
ID	322	Textiles	3	0	3
ID	331	Furniture, Fixtures & Equipment	3	0	3
ELECTIVE		Technical Elective*	1-3	0-4	3/4
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	*4*	*0*	*4*
			13/15	6-10	18/19

Quarter IX

Course	No.	Course Title	C	L	T
ID	330	Interior Design Studio V – Hospitality	2	6	5
ABT	421	Acoustics & Lighting	3	0	3
ELECTIVE		*Math/Science Core*	*4*	*0*	*4*
ELECTIVE		*Social Sciences Core*	*4*	*0*	*4*
			13	6	16

Quarter X

Course	No.	Course Title	C	L	T
ID	410	Interior Design Studio VI – Institutional	2	6	5
ID	324	Advanced Lighting	3	0	3
PHY	*300*	*Physics II & Lab (MA/SCI Core)*	*3*	*2*	*4*
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	*4*	*0*	*4*
			12	8	16

Quarter XI

Course	No.	Course Title	C	L	T
ID	420	Project Estimating & Scheduling	2	2	3
ID	421	Portfolio Review	2	2	3
ABT	314	Construction Contracts & Specifications	3	0	3
ABT	423	Senior Thesis Proposal	1	0	1
ELECTIVE		*Communications Core*	*4*	*0*	*4*
			12	4	14

Quarter XII

Course	No.	Course Title	C	L	T
ID	430	Interior Design Studio VII – Senior Thesis	2	6	5
ID	431	Professional Issues in Interior Design	3	0	3
ABT	433	Construction Law	3	0	3
ELECTIVE		Technical Elective*	1-3	0-4	3/4
			9-11	6-10	14/15

Total Quarter Credit Hours = 95/97

*ID Technical Electives List

Course	No.	Course Title	C	L	T
ABT	127	Introduction to Construction Estimating	3	0	3
ABT	221	Visualization Studies	2	2	3
MGM	105	Effective Teams and Projects	2	2	3
MGM	130	Accounting Fundamentals	3	2	4
MGM	214	Marketing Communications	2	2	3
MGM	264	Sales and Service Management	2	2	3
MGM	314	Principles of Marketing	1	4	3
MGM	335	Human Resource Management	2	2	3
MGM	355	21st Century Leadership	1	4	3
MGM	413	Business Presentations	1	4	3
MGM	445	Negotiation	2	2	3

Legend

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PLEASE NOTE: All liberal arts core courses are listed in italics.

All bachelor degree students are required to take 28 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses.

Associate in Science

The Marine Technology program offers an associate degree in Marine Technology. Theory and practical training in marine mechanics, marine business concepts, marine electricity, and marine systems installation, repair and service are the thrust of the program. Hands-on practical skills in installation, service, and repairs to mechanical, electrical, electronic, and hydraulic systems utilized by both recreational and commercial vessels are stressed throughout the curriculum to reinforce the in-depth theory classes. In addition, marine business procedures are taught using computerized learning methods with marine-specific software.

Graduates of the associate degree program are skilled technicians ready for entry-level positions in such areas as marina/boatyard operations, vessel manufacturing, engine repair, support services for commercial vessels, engine room staff aboard commercial vessels, marine electronics installation, and marine wholesale/retail product sales.

After completing some prerequisites, graduates of this program are eligible to continue on for a Bachelor of Science Degree in Automotive Service Management or in Business Management.
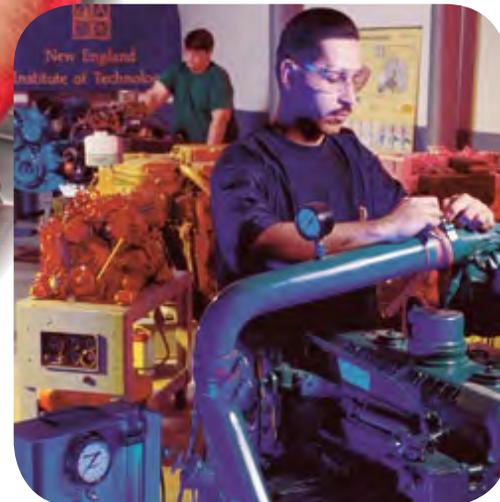
Marine Technology
Associate in Science Degree

Quarter I

Course	No.	Course Title	C	L	T
MT	105	Introduction to Marine Technology	2	0	2
MT	116	Introduction to Engine Theory	3	0	3
MT	117	Introduction to Engine Lab	0	4	1
MT	118	Introduction to Electricity Fundamentals	3	0	3
MT	119	Introduction to Electricity Fundamentals Lab	0	4	1
		CHOOSE ONE *(depending upon Math placement)*			
MA	*100/110*	*Introduction to College Math (MA/SCI Core)*	*4*	*0*	*4*
-or-					
MA	*200*	*Applied Math for Business (MA/SCI Core)*			
			12	8	14

Quarter II

Course	No.	Course Title	C	L	T
MT	120	Advanced Marine Electricity & Electronics Installation	4	6	7
MT	127	Marine Engine Applications	2	2	3
PHY	*126*	*Applied Physics & Lab (MA/SCI Core)*	*3*	*2*	*4*
		CHOOSE ONE *(depending upon English placement)*			
EN	*101*	*Introduction to Writing and Workplace Communication (COM Core)*	*4*	*0*	*4*
-or-					
EN	*102*	*Critical Thinking and College Writing (COM Core)*			
			13	10	18

Quarter III

Course	No.	Course Title	C	L	T
MT	114	Marine Welding and Cutting	1	3	2
MT	138	Outboard Engine Overhaul and Systems Diagnosis	4	8	8
		CHOOSE ONE *(depending upon Quarter I)*			
EN	*102*	*Critical Thinking and College Writing (COM Core)*	*4*	*0*	*4*
-or-					
ELECTIVE		*Communications Core*			
			9	11	14

Quarter IV

Course	No.	Course Title	C	L	T
MT	215	Fuel Systems Theory and Introduction to EFI Applications	4	4	5
MT	216	Marine Drive Systems Theory and Service	4	4	5
BU	*236*	*Small Business and the Law (SS Core)*	*4*	*0*	*4*
		CHOOSE ONE *(depending on Math placement)*			
MA	*200*	*Applied Math for Business (ASM* Students) (MA/SCI Core)*	*4*	*0*	*4*
-or-					
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*			
			16	8	18

Quarter V

Course	No.	Course Title	C	L	T
MT	217	Diesel Engine Service and Maintenance	2	6	4
MT	218	Marine Systems	2	2	3
MT	261	Fiberglass Fabrication and Repair	2	2	3
ELECTIVE		*Social Sciences Core*	*4*	*0*	*4*
			10	10	14

Quarter VI

Course	No.	Course Title	C	L	T
MT	254	Marina and Boatyard Management	3	0	3
MT	258	Elements of Marine Surveying	1	3	2
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	*4*	*0*	*4*
		CHOOSE ONE			
MT	255	Marine Industry Internship	0	20	4
-or-					
MT	262	Advanced Composites and Fabrication	2	2	3
Plus any:					
AUB	265	Custom Air Brush Art	2	2	3
MT	260	OSHA Maritime Industry Safety (Ship Yard)	3	0	3
IT	111	Introduction to Information Technology (ASM* Students)	2	2	3
NE	115	Computer and Networking Fundamentals (ASM* Students)	2	2	3
MGM	113	Accounting Fundamentals (ASM* Students)	3	2	4
			10-13	5-25	15-17

Total Quarter Credit Hours = 93-95

Associate in Science Degree

Students at the associate in science level of the Mechanical Engineering Technology program concentrate on product design. They study the design of products by learning design principles, sketching, problem solving, and how both the engineering materials and manufacturing processes and machines are selected and scheduled. Students gain a wide background of knowledge in such areas as electricity and electronics, metrology and the measurements of products, manufacturing processes, and tool design.

Design is emphasized utilizing the latest in computer drafting technology (CAD). Product design also affords an opportunity to work in an area of special interest such as a hobby. Graduates could work in the design of recreational equipment such as wing surfers or bicycles, or possibly automotive design or even toy design. Product design can be an extremely exciting and rewarding career.

Every item that we buy today has been the result of a product design development process. Today's product designer works as a member of a product design and development team. Cross-functional product design and development teams are responsible for bringing a product from initial conception to product launch when it becomes available to the public. They also work to continually improve products after product launch. Graduates of the Mechanical Engineering Technology program are prepared for several types of design and technologist positions on these teams, including positions such as product designer, CADD designer, tool designer, R&D technician, or manufacturing technician.

Graduates with an Associate in Science Degree in Mechanical Engineering Technology are eligible to continue on for a Bachelor of Science in Mechanical Engineering Technology.

Mechanical Engineering Technology
Associate in Science Degree

Quarter I

Course	No.	Course Title	C	L	T
MCT	112	Introduction to Mechanical Engineering Technology	2	0	2
MCT	113	Design Principles	3	0	3
MCT	115	Computer Aided Design I	3	2	4
		CHOOSE ONE *(depending upon Math placement)*			
MA	*100/110*	*Introduction to College Math (MA/SCI Core)*	*4*	*0*	*4*
-or-					
ELECTIVE		*Social Sciences Core*			
		CHOOSE ONE *(depending upon English placement)*			
EN	*101*	*Introduction to Writing and Workplace Communication (COM Core)*	*4*	*0*	*4*
-or-					
EN	*102*	*Critical Thinking and College Writing (COM Core)*			
			16	2	17

Quarter II

Course	No.	Course Title	C	L	T
MCT	124	Computer Aided Design II	3	2	4
MCT	125	Manufacturing Processes	4	0	4
MA	*125*	*Technical Math I (MA/SCI Core)*	*4*	*0*	*4*
		CHOOSE ONE *(depending upon Quarter II)*			
EN	*102*	*Critical Thinking and College Writing (COM Core)*	*4*	*0*	*4*
-or-					
ELECTIVE		*Communications Core*			
			15	2	16

Quarter III

Course	No.	Course Title	C	L	T
MCT	134	Computer Aided Design III	3	2	4
MCT	136	Electricity/Electronics	3	2	4
MCT	212	Metrology	2	2	3
MA	*210*	*Technical Math II (MA/SCI Core)*	*4*	*0*	*4*
			12	6	15

Quarter IV

Course	No.	Course Title	C	L	T
MCT	130	Engineering Materials	3	2	4
MCT	226	Electricity/Electronics II	2	2	3
MCT	215	Statics	3	2	4
PS	*210*	*Human Relations in the Workplace (SS Core)*	*4*	*0*	*4*
			12	6	15

Quarter V

Course	No.	Course Title	C	L	T
MCT	224	Mechanics of Materials	3	2	4
MCT	233	Kinematics	2	2	3
MCT	239	Quality	3	2	4
PHY	*200*	*Physics I & Lab (MA/SCI Core)*	*3*	*2*	*4*
			11	8	15

Quarter VI

Course	No.	Course Title	C	L	T
MCT	235	Automation	3	2	4
MCT	237	Design Project	3	2	4
MCT	240	Manufacturing Planning	4	0	4
PHY	*300*	*Physics II & Lab (MA/SCI Core)*	*3*	*2*	*4*
			13	6	16

Total Quarter Credit Hours = 94

Legend

C = Number of lecture hours per week
L = Number of laboratory hours per week
T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one credit depending on the expected amount of pre- or post-lab work.

PLEASE NOTE: All liberal arts core courses are listed in italics.

All associate degree students are required to take 32 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses. Students who place out of EN 101, EN 102 or MA 100/110 must still take 32 credits of core courses.

Bachelor of Science

Manufacturing in the United States had its start in New England, where it has been the cornerstone of the economy. Today, New England has many new small manufacturing companies creating a job market for today's engineers and designers.

The Bachelor of Science in Mechanical Engineering Technology, which focuses on product and process design, addresses today's job market emphasizing product design, tool and machine design, and manufacturing methods, as well as supporting engineering professions such as development engineers, application engineers, CAD engineering specialties, and basic engineering problem-solvers. The courses in the program complement and augment the courses completed at the associate level. The courses at the bachelor level allow students to link the design aspect of product development to the production phase, and facilitate delivery to the customer. Students learn the theory and application of hydraulics, pneumatics, dynamics, instrumentation, thermodynamics and heat transfer, and machine design. Additionally, students gain knowledge in mechatronics, materials and inventory control, and plastics design.

Near the end of the program, students are required to complete a capstone course, which provides an excellent opportunity to tie the coursework together into a comprehensive senior project.

Graduates are well prepared for employment opportunities in research and development, as well as the design and problem solving professions in manufacturing and design departments. The opportunities for design professionals are diverse and they are needed for virtually every conceivable type of manufactured product, including those less obvious process-intensive product types such as clothing and foodstuffs. Product design offers exceptional opportunities for those especially creative individuals in such fields as machine design, specialized or customized product design, packing or container design, and toy design. Graduates are also prepared for employment opportunities as technologists in the area of production, quality, processes, automation, and tooling.

This program is designed for graduates of the New England Institute of Technology Associate in Science in Mechanical Engineering Technology degree program. Graduates of other colleges with related degrees in engineering technology may be eligible for transfer into the junior year of the program, or may be eligible for advanced standing through transfer, or, in some cases, related work experience.

ACCREDITATION STATUS

The Bachelor of Science Degree program in Mechanical Engineering Technology is accredited by the Engineering Technology Accreditation Commission of ABET, http://www.abet.org.

Mechanical Engineering Technology
Bachelor of Science Degree

Quarter VII

Course	No.	Course Title	C	L	T
MGM	340	Engineering Finance	2	2	3
MCT	314	Mechatronics	3	2	4
MCT	317	CAD/CAM in Design and Manufacturing	3	2	4
MA	*310*	*Calculus I (MA/SCI Core)*	*4*	*0*	*4*
			12	6	15

Quarter VIII

Course	No.	Course Title	C	L	T
EST	254	Introduction to Programmable Controllers	3	2	4
MCT	322	Fluid Power	3	2	4
MA	*320*	*Calculus II (MA/SCI Core)*	*4*	*0*	*4*
EN	*331*	*Research Writing (COM Core)*	*4*	*0*	*4*
			14	4	16

Quarter IX

Course	No.	Course Title	C	L	T
MCT	336	Dynamics	3	2	4
MCT	422	Manufacturing Processes II	3	2	4
EET	486	LabVIEW Programming	3	2	4
EC	*301*	*The Global Economy (SS Core)*	*4*	*0*	*4*
			13	6	16

Quarter X

Course	No.	Course Title	C	L	T
MCT	424	Design with Plastics	3	2	4
MCT	431	Machine Design	3	2	4
CHM	*300*	*Chemistry & Lab (MA/SCI Core)*	*3*	*2*	*4*
EN	*421*	*Technical Communications (COM Core)*	*4*	*0*	*4*
			13	6	16

Quarter XI

Course	No.	Course Title	C	L	T
MCT	324	Design for Manufacture and Assembly	3	2	4
MCT	418	Advanced Computer Applications	2	2	3
MCT	420	Thermodynamics	3	2	4
MCT	425	Engineering Capstone Project Seminar	2	0	2
			10	6	13

Quarter XII

Course	No.	Course Title	C	L	T
MCT	434	Heat Transfer	3	2	4
MCT	451	Engineering Capstone Project	2	4	4
HU	*331*	*Ethics and Technology (HU Core)*	*4*	*0*	*4*
		CHOOSE ONE			
MCT	416	Operations Management	4	0	4
-or-					
ELT	481	Engineering Internship	0	20	4
			9/13	6/20	16

Total Quarter Credit Hours = 92

Associate in Science Degree

The Associate in Science in Medical Laboratory Technology prepares students as entry-level medical laboratory technicians. Medical laboratory technicians use basic and specialized laboratory skills, computer technology, and knowledge of the human body to provide accurate and precise laboratory results requested by the physician to help diagnose, treat, and monitor disease. Medical laboratory technicians must also demonstrate ethical and moral attitudes and principles. An attitude of respect for the patient and confidentiality of the patient's record and diagnoses must be maintained at all times.

The MLT curriculum offers courses in basic sciences (biology, chemistry, anatomy & physiology), mathematics, social sciences, and the humanities as well as both didactic (including student laboratories) and clinical experience courses in the areas of hematology, coagulation, microbiology, immunohematology, chemistry, parasitology, immunology, and urinalysis.

Upon completion of the program, students are eligible to sit for a national certification examination, passage of which is required for state licensure. The certification of choice for most employers is through the American Society of Clinical Pathology (ASCP) Board of Certification. Completion of the MLT Program is not contingent upon passage of any external certification examination.

ACCREDITATION STATUS

The Medical Laboratory Technician program at New England Institute of Technology is seeking initial accreditation from the National Accrediting Agency of Clinical Laboratory Sciences (NAACLS). www.naacls.org.

National Accrediting Agency for Clinical Laboratory Sciences
5600 N. River Road, Suite 720
Rosemont, IL 60018-5119
(847) 939-3597
(773) 714-8886 (FAX)
info@naacls.org
http://www.naacls.org

Medical Laboratory Technology
Associate in Science Degree

Quarter I

Course	No.	Course Title	C	L	T
MLT	110	Introduction to Medical Laboratory Technology	2	2	4
BIO	100	Anatomy & Physiology I	4	0	4
BIO	101	Anatomy & Physiology I Lab	0	4	2
MA	*109*	*Math for Life Science (MA/SCI Core)*	*4*	*0*	*4*
EN	*110*	*Healthcare Communication Skills (COM Core)*	*4*	*0*	*4*
			14	6	18

Quarter II

Course	No.	Course Title	C	L	T
MLT	120	Urinalysis and Body Fluids	3	2	4
MLT	121	Immunology	4	0	4
BIO	120	Anatomy & Physiology II	4	0	4
BIO	121	Anatomy & Physiology II Lab	0	4	2
CHM	*101*	*Life Science Chemistry (MA/SCI Core)*	*3*	*2*	*4*
			14	8	18

Quarter III

Course	No.	Course Title	C	L	T
MLT	130	Hematology I	3	2	4
MLT	131	Medical Microbiology I	3	2	4
MLT	132	Clinical Chemistry I	3	2	4
EN	*102*	*Critical Thinking and College Writing (COM Core)*	*4*	*0*	*4*
			13	6	16

Quarter IV

Course	No.	Course Title	C	L	T
MLT	240	Hematology II	3	2	4
MLT	241	Medical Microbiology II	3	2	4
MLT	242	Clinical Chemistry II	3	2	4
ELECTIVE		*Social Sciences Core*	*4*	*0*	*4*
			13	6	16

Quarter V

Course	No.	Course Title	C	L	T
MLT	250	Immunohematology	3	2	4
MLT	251	Clinical Practicum I (5 weeks)	0	24	6
ELECTIVE		*Humanities Core*	*4*	*0*	*4*
ELECTIVE		*Social Science Core*	*4*	*0*	*4*
			11	26	18

Quarter VI

Course	No.	Course Title	C	L	T
MLT	260	Medical Laboratory Technology Seminar	2	0	2
MLT	261	Clinical Practicum II	0	24	8
ELECTIVE		*Humanities Core*	*4*	*0*	*4*
			6	24	14

Total Quarter Credit Hours = 100

Legend

C = Number of lecture hours per week

L = Number of laboratory / practicum hours per week

T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one credit depending on the expected amount of pre- or post-lab work.

PLEASE NOTE: All liberal arts core courses are listed in italics.

All associate degree students are required to take a minimum of 32 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses. Students who place out of EN 101, EN 102 or MA 100/110 must still take 32 credits of core courses.

Associate in Science Degree

The Associate in Science Degree in Nursing program prepares students with the knowledge and skills needed to begin a career as a Registered Nurse as well as a strong foundation for baccalaureate education and life-long learning. Graduates of the program are eligible to take the National Council Licensing Examination for Registered Nurses (NCLEX-RN). Registered Nurses (RNs) provide for the physical, mental, spiritual, and emotional needs of their patients. RNs are advocates and health educators for patients, families, and communities.

The nursing profession is ultimately about caring for people. Today's nurse must also possess high-tech and decision-making skills required to provide high quality, safe patient care. At New England Tech, students get hands-on experience in a variety of health care settings. In addition, students are prepared for real-world practice in our new, fully equipped labs with the latest nursing simulation technologies, where they develop confidence with clinical decision-making, communication, teamwork, and leadership.

This seven-quarter program may be completed in as little as 21 months. Graduates of the Associate in Science Degree in Nursing program are eligible to take the NCLEX-RN. Graduates are prepared to work in a wide variety of healthcare settings, including hospitals, home health, long-term care, healthcare clinics, and outpatient care. Graduates are prepared and encouraged to continue on for a Bachelor of Science Degree in Nursing (RN-BSN) at NEIT while working as a Registered Nurse.

ACCREDITATION STATUS

The Associate in Science Degree in Nursing program is accredited by the Accreditation Commission for Education in Nursing (ACEN).

Accreditation Commission for Education in Nursing
3343 Peachtree Road NE
Suite 850
Atlanta, Georgia 30326
Telephone: (404) 975-5000
FAX: (404) 975-5020

Quarter I

Course	No.	Course Title	C	L	T
NUR	110	Introduction to Nursing	3	0	3
MGM	112	Introduction to Office Software	2	2	3
BIO	107	Comprehensive Anatomy & Physiology I and Lab	4	4	6
MA	*109*	*Math for Life Science (depending upon Math placement)*	*4*	*0*	*4*
			13	6	16

Quarter II

Course	No.	Course Title	C	L	T
NUR	123	Nursing Fundamentals I	3	6	5
BIO	127	Comprehensive Anatomy & Physiology II & Lab	4	4	6
BIO	*122*	*Microbiology (MA/SCI Core)*	*3*	*2*	*4*
			10	12	15

Quarter III

Course	No.	Course Title	C	L	T
NUR	132	Nursing Fundamentals II	4	6	6
BIO	133	Pharmacology I	3	2	4
BIO	231	Comprehensive Pathophysiology	4	0	4
EN	*110*	*Healthcare Communication Skills (COM Core)*	*4*	*0*	*4*
			15	8	18

Quarter IV

Course	No.	Course Title	C	L	T
BIO	233	Pharmacology II	3	2	4
NUR	244	Medical Surgical Nursing & Assessment I	4	6	6
SO	*203*	*Social Problems (SS Core)*	*4*	*0*	*4*
			11	8	14

Quarter V

Course	No.	Course Title	C	L	T
NUR	256	Medical Surgical Nursing & Assessment II	4	6	6
NUR	257	Mental Health Nursing	2	6	4
PS	*140*	*Life-Span Development (SS Core)*	*4*	*0*	*4*
			10	12	14

Quarter VI

Course	No.	Course Title	C	L	T
NUR	264	Maternal Child Health Nursing	2	6	4
NUR	265	Pediatric Nursing	2	6	4
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	*4*	*0*	*4*
			8	12	12

Quarter VII

Course	No.	Course Title	C	L	T
NUR	275	Nursing Care of Complex Patients	5	6	7
NUR	274	Nursing Capstone Course	5	0	5
			10	6	12

Total Quarter Credit Hours = 109

Intersession

Course	No.	Course Title	C	L	T
EN	*102*	*Critical Thinking and College Writing (COM Core)*	*4*	*0*	*4*
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	*4*	*0*	*4*
			8	0	8

Legend

C = Number of lecture hours per week
L = Number of laboratory hours per week
T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one credit depending on the expected amount of pre- or post-lab work.

PLEASE NOTE: All liberal arts core courses are listed in italics.

All associate degree students are required to take 32 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses. Students who place out of EN 101, EN 102 or MA 109 must still take 32 credits of core courses.

Associate in Science Degree

The Occupational Therapy Assistant (OTA) associate degree program prepares students to help a variety of people in many different environments. OTAs assist people of all ages, with varying abilities or handicaps, to gain independence in their day-to-day activities. The primary focus of occupational therapy practice is to enhance participation in meaningful occupations for all people of all ages, regardless of the type of limitation which interferes with participation in life activities. Occupational therapy is a hands-on career, which involves working to change people's lives for the better. Because every client has a unique set of circumstances, OTAs help to develop and carry out an individualized plan of care for each client.

Graduates of the OTA Associate in Science Degree program work not only in traditional medical environments but also work in community-based settings, work environments, schools and other agencies addressing the needs of

individuals with disabilities. In the field, the OTA works cooperatively with a registered occupational therapist (OTR) who is responsible for all aspects of occupational therapy care. Most of the time, however, the OTA works independently with individual clients or groups. In the associate degree program, students learn to act as part of the rehabilitation team, collecting data needed for the client's initial evaluation, carrying out treatment plans, using technology to help people overcome disabilities, and designing activities to help people reach their goals.

The OTA program is offered in both day and evening sessions for courses in Quarters I through IV. In Quarter V of the program, all courses are offered only during the day.

After completion of all classroom training on campus and Level I Fieldwork off campus, students enter the community for Level II Fieldwork. The two Level II Fieldwork experiences give students many opportunities to apply classroom training to real life situations. Upon successful completion of all degree requirements, students will be eligible to sit for the National Certification Examination for Occupational Therapy Assistants. Employment is available in a wide variety of settings in the areas of physical disabilities, pediatrics, and geriatrics, as well as in mental health and wellness programs. In addition, after completing certain prerequisites, graduates of this program are eligible to continue on for a Bachelor of Science Degree in Business Management or apply for entry to the Master of Science Degree in Occupational Therapy.

ACCREDITATION STATUS

The Occupational Therapy Assistant Program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE), c/o Accreditation Department, American Occupational Therapy Association (AOTA), 4720 Montgomery Lane, Suite 200, Bethesda, MD 20814-3449. AOTA's phone number is (301) 652-AOTA and the website is www.acoteonline.org. Graduates of the program will be able to sit for the national certification examination for the occupational therapy assistant administered by the National Board for Certification in Occupational Therapy (NBCOT). After successful completion of this exam, the individual will be a Certified Occupational Therapy Assistant (COTA). Most states, including Rhode Island, require licensure in order to practice. State licensure is usually based on the results of the NBCOT Certification Examination. A felony conviction may affect a graduate's ability to sit for the NBCOT certification examination or attain state licensure.
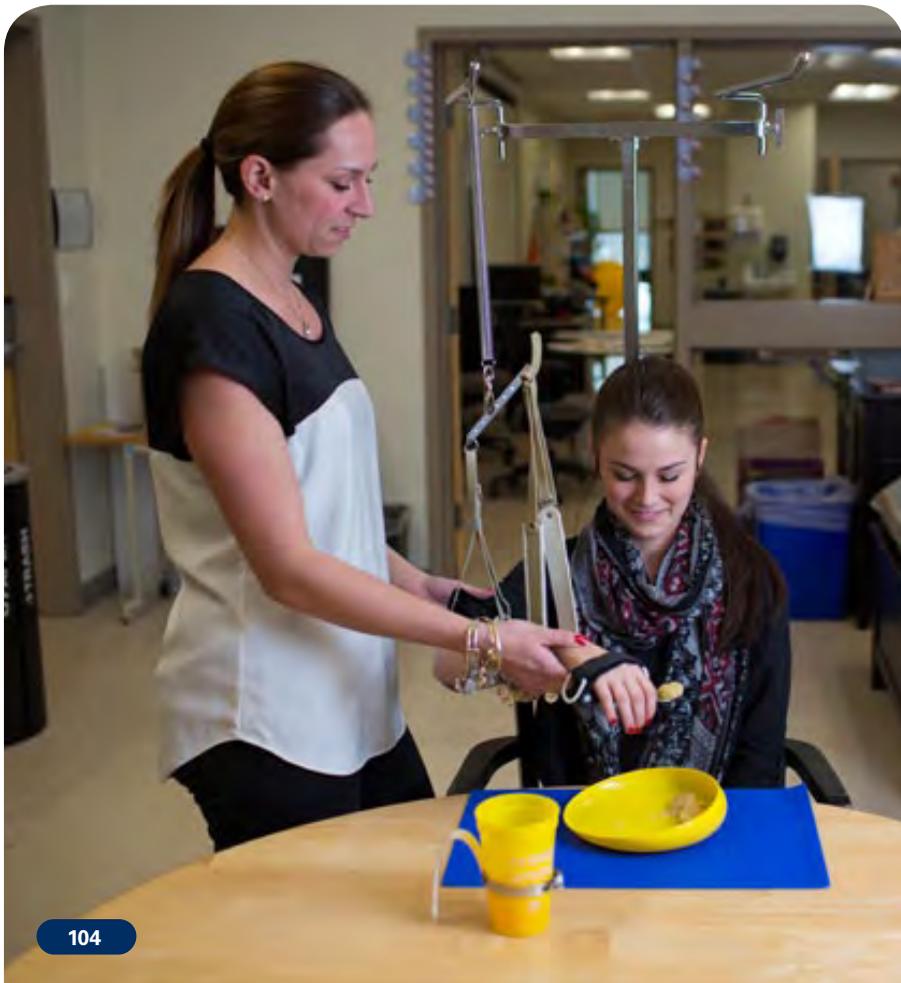
Occupational Therapy Assistant
Associate in Science Degree

Quarter I

Course	No.	Course Title	C	L	T
OTA	110	Foundations of Occupational Therapy Assistant Practice	4	0	4
OTA	111	Foundations of Occupational Therapy Assistant Practice Lab	0	4	2
BIO	*100*	*Anatomy and Physiology I*	*4*	*0*	*4*
BIO	*101*	*Anatomy and Physiology I Lab*	*0*	*4*	*2*
HS	*120*	*Medical Terminology I*	*1*	*0*	*1*
EN	*110*	*Healthcare Communication Skills (COM Core)*	*4*	*0*	*4*
			13	8	17

Quarter II

Course	No.	Course Title	C	L	T
OTA	122	Development of Human Occupation Across the Lifespan	4	0	4
OTA	136	Level I Fieldwork – Mental Health	1	3	2
OTA	137	Mental Health Populations and Practice for Occupational Therapy	3	4	5
BIO	*120*	*Anatomy and Physiology II*	*4*	*0*	*4*
BIO	*121*	*Anatomy and Physiology II Lab*	*0*	*4*	*2*
HS	*123*	*Medical Terminology II*	*1*	*0*	*1*
			13	11	18

Quarter III

Course	No.	Course Title	C	L	T
OTA	123	Functional Kinesiology	2	4	4
OTA	132	Pediatric Populations	4	0	4
OTA	133	Pediatric Practice for Occupational Therapy	3	4	5
EN	*102*	*Critical Thinking and College Writing (COM Core)*	*4*	*0*	*4*
			13	8	17

Quarter IV

Course	No.	Course Title	C	L	T
OTA	236	Level I Fieldwork – Adult Rehab	1	3	2
OTA	242	Adult Populations	4	0	4
OTA	243	Adult Practice for Occupational Therapy	3	6	6
OTA	250	Gerontology Practice for Occupational Therapy	3	0	3
		CHOOSE ONE *(depending upon Math placement)*			
MA	*109*	*Math for Life Science (MA/SCI Core)*	*4*	*0*	*4*
		-or-			
ELECTIVE		*Math/Science Core*			
			15	9	19

Quarter V

Course	No.	Course Title	C	L	T
OTA	255	Practice Issues for the Occupational Therapy Assistant	0	4	2
OTA	258	Level II Fieldwork* I	0	30	10
			0	34	12

Quarter VI

Course	No.	Course Title	C	L	T
OTA	263	Senior Capstone and Practice Development Seminar	4	0	4
OTA	268	Level II Fieldwork*II	0	30	10
			4	30	14

Total Quarter Credit Hours = 105

Intersession (This will vary depending upon the start date)

Course	No.	Course Title	C	L	T
ELECTIVE		*Social Sciences Core*	*4*	*0*	*4*
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	*4*	*0*	*4*
			8	0	8

Students with no college credits will need to take at least one course during intersession

Legend

C = Number of lecture hours per week
L = Number of laboratory hours per week
T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one credit depending on the expected amount of pre- or post-lab work.

* 3 Fieldwork hours =1 quarter credit hour

PLEASE NOTE: All liberal arts core courses are listed in italics.

All associate degree students are required to take 32 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses. Students who place out of EN 101 (or EN 110), EN 102 or MA 109 must still take 32 credits of core courses.

Level I Fieldwork offered in Quarters 2 and 4 for a total of 60 hours. The first Level II Fieldwork begins in Quarter 5 during the 3rd week of the quarter. The second Level II Fieldwork begins in Quarter 6. Each Fieldwork includes full-time placement in a facility for 8 weeks for each placement; for a total of 16 weeks.

PLEASE NOTE: Students in this program are required to maintain a minimum grade of C+ in all OTA courses.

Master of Science Degree

The Master of Science in Occupational Therapy (MSOT) program at NEIT allows certified occupational therapy assistants to expand on their academic and clinical experience to become leaders in their profession. This program is designed to be a bridge for professionals to move to the next level of responsibility as registered occupational therapists. The program is offered in a weekend format that requires students to be on campus five (5) weekends in each ten-week academic quarter and to participate online during alternate weeks. A student following the MSOT program as outlined may complete the program in ten (10) quarters. Registered occupational therapists (OTRs) assist people of all ages, with varying abilities or handicaps, to become independent in their day-to-day activities. Because every client has a unique set of circumstances, OTRs evaluate, develop, and help carry out a unique treatment plan for each one.

As an OTR, graduates can work in traditional medical environments or in any setting where people need to learn new ways to live satisfying and productive lives. In the field, OTRs often supervise occupational therapy assistants and other personnel. Students learn to use a variety of assessment techniques to identify a client's functional problems as well as their underlying physical, mental, and psychosocial problem areas. The OTR takes the lead in using pertinent personal information as well as theoretical and scientific evidence to establish appropriate intervention plans for individual clients or groups. The OTR acts as part of the rehabilitation team, participating in various interdisciplinary meetings and assuring that all occupational therapy intervention meets the legal, ethical, and fiscal requirements that apply to various medical and community-based settings.

After completion of all classroom training on campus, and Level I Fieldwork off campus, students enter the community for Level II Fieldwork. Two full-time twelve-week Level II Fieldwork experiences give students many opportunities to apply classroom training in real life situations. Upon successful completion of all degree requirements, students will be eligible to sit for the National Certification Examination for Occupational Therapists. Those who complete the program and pass the exam are awarded the title of Occupational Therapist Registered. Employment is available in a wide variety of settings in the areas of physical disabilities, pediatrics, and geriatrics, as well as in mental health and wellness programs.

ACCREDITATION STATUS

The entry-level occupational therapy master's degree program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE), c/o Accreditation Department, American Occupational Therapy Association (AOTA), 4720 Montgomery Lane, Suite 200, Bethesda, MD 20814-3449. ACOTE's telephone number c/o AOTA is (301) 652-AOTA and the website is www.acoteonline.org. Graduates of the program will be eligible to sit for the national certification examination for the occupational therapist administered by the National Board for Certification in Occupational Therapy (NBCOT). After successful completion of this exam, the individual will be an Occupational Therapist, Registered (OTR). In addition, most states require licensure in order to practice; however, state licenses are usually based on the results of the NBCOT Certification Examination. A felony conviction may affect a graduate's ability to sit for the NBCOT certification examination or attain state licensure.

Occupational Therapy
Master of Science Degree

Quarter I

Course	No.	Course Title	C	L	T
OT	310	Service Delivery Models in Occupational Therapy	4	0	4
ELECTIVE		Math/Science Core	4	0	4
EN	331	Research Writing (COM Core)*	4	0	4
EN	422	Writing in the Health Sciences (COM Core) (preferred)	4	0	4
-or-					
EN	421	Technical Communications (COM Core)			
			16	0	16

*EN 331 can be taken during the summer quarter before the start of the program in October.

Quarter II

Course	No.	Course Title	C	L	T
BIO	440	Functional Neuroscience (MA/SCI Core)	4	0	4
ELECTIVE		Humanities Core	4	0	4
ELECTIVE		Social Sciences Core	4	0	4
			12	0	12

Quarter III

Course	No.	Course Title	C	L	T
OT	320	Theoretical and Clinical Reasoning in Occupational Therapy	4	0	4
OT	325	Kinesiology	2	2	3
PS	410	Applied Research Statistics (SS Core)	4	0	4
			10	2	11

Quarter IV

Course	No.	Course Title	C	L	T
OT	410	Critical Analysis of Scientific Literature	4	0	4
OT	530	Service Management in Mental Health	4	2	5
OT	536	Level I A Fieldwork	0	3	1
			8	5	10

Quarter V

Course	No.	Course Title	C	L	T
OT	540	Service Management in Pediatrics	4	2	5
OT	546	Level I B Fieldwork	0	3	1
OT	552	Leadership and Advocacy	3	0	3
			7	5	9

Quarter VI

Course	No.	Course Title	C	L	T
OT	548	Research Design	4	0	4
OT	550	Service Management for Adult Rehabilitation	4	2	5
OT	556	Level I C Fieldwork	0	3	1
			8	5	10

Quarter VII

Course	No.	Course Title	C	L	T
OT	555	Wellness and Participation in Populations	3	0	3
OT	560	Service Management in Geriatrics	4	2	5
OT	565	Practicum in Population-Based OT Services	1	4	3
			8	6	11

Quarter VIII

Course	No.	Course Title	C	L	T
OT	670	Practice Issues for the Occupational Therapist Seminar	6	0	6
OT	673	Capstone Project	2	4	4
			8	4	10

Quarter IX

Course	No.	Course Title	C	L	T
OT	688	Level II A Fieldwork – full time (12 weeks)	0	35	12
			0	35	12

Quarter X

Course	No.	Course Title	C	L	T
OT	698	Level II B Fieldwork – full time (12 weeks)	0	35	12
			0	35	12

Total Quarter Credit Hours = 113

LEGEND

C = Number of lecture hours per week
L = Number of laboratory hours per week
T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one credit depending on the expected amount of pre- or post-lab work.

PLEASE NOTE: All liberal arts core courses are listed in italics.

Associate in Science Degree

The Physical Therapist Assistant (PTA) associate degree program prepares students to help a variety of people in diverse settings. PTAs assist people of all ages with various movement disorders to become independent in their day-to-day functions. Physical therapy is a hands-on career, which literally involves working to change people's lives for the better. Because every client has a unique set of circumstances, PTAs help to carry out a unique treatment plan for each one, under the direction and supervision of a physical therapist.

As a PTA, graduates can work in traditional medical environments or in settings where people need to learn new ways to prevent injury or to promote health, wellness, and fitness. In the field, the PTA is supervised by a licensed physical therapist (PT). The PTA works with individual clients or groups under the direction of a PT. In the associate degree program, students learn to act as part of the rehabilitation team, collecting data to determine the effectiveness of patient interventions, carrying out selected physical therapy interventions outlined in the PT treatment plans, using technology to help people overcome disabilities, and designing activities to help people reach their goals.

After completion of all classroom training on campus and Level I Clinical Education off campus, students enter the community for Level II Clinical Education. The two Level II Clinical Education experiences give students many opportunities to apply classroom training to real life situations. Upon successful completion of all degree requirements, students will be eligible to sit for the National Physical Therapy Examination for Physical Therapist Assistants. Employment is available in a wide variety of settings in the areas of physical disabilities, pediatrics, and geriatrics, as well as in athletic facilities and wellness programs. In addition, after completing certain prerequisites*, graduates of this program are eligible to continue on for a Bachelor of Science Degree in Business Management.

ACCREDITATION STATUS

The Physical Therapist Assistant Program at New England Institute of Technology is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE) of the American Physical Therapy Association, 1111 North Fairfax Street, Alexandria, Virginia 22314-1488; telephone: (703) 706-3245; email: accreditation@apta.org; website: www.capteonline.org.

Physical Therapist Assistant
Associate in Science Degree

Quarter I

Course	No.	Course Title	C	L	T
PTA	102	Introduction to Kinesiology	0	2	1
PTA	111	Foundations of Physical Therapy	4	0	4
PTA	112	Foundations of Physical Therapy Lab	0	4	2
BIO	*100*	*Anatomy and Physiology I (MA/SCI Core)*	*4*	*0*	*4*
BIO	*101*	*Anatomy and Physiology I Lab (MA/SCI Core)*	*0*	*4*	*2*
HS	*110*	*Applied Medical Terminology*	*0*	*2*	*1*
MA	*109*	*Math for Life Science (MA/SCI Core)*	*4*	*0*	*4*
			12	12	18

Quarter II

Course	No.	Course Title	C	L	T
PTA	123	Data Collection Skills	1	4	3
PTA	124	Clinical Kinesiology	2	0	2
PTA	125	Clinical Kinesiology Lab	0	4	2
BIO	*120*	*Anatomy and Physiology II (MA/SCI Core)*	*4*	*0*	*4*
BIO	*121*	*Anatomy and Physiology II Lab (MA/SCI Core)*	*0*	*4*	*2*
PHY	*126*	*Applied Physics & Lab (MA/SCI Core)*	*3*	*2*	*4*
			10	14	17

Quarter III

Course	No.	Course Title	C	L	T
PTA	136	Level I Clinical Education A	1	3	2
PTA	138	Physical Agents & Lab	2	4	4
PTA	139	Advanced Data Collection Skills	0	4	2
PTA	142	Principles of Musculoskeletal Physical Therapy Intervention & Lab	2	4	4
PTA	143	Pathophysiology for the PTA	1	2	2
EN	*110*	*Healthcare Communication Skills (COM Core)*	*4*	*0*	*4*
			10	17	18

Quarter IV

Course	No.	Course Title	C	L	T
PTA	237	Level I Clinical Education B	0	6	2
PTA	240	Principles of Neuromuscular Physical Therapy Intervention and Lab	4	4	6
PTA	242	Principles of Cardiopulmonary Physical Therapy Intervention and Lab	4	4	6
PS	*202*	*Psychology of Healthcare (SS Core)*	*4*	*0*	*4*
			12	14	18

Quarter V

Course	No.	Course Title	C	L	T
PTA	253	Practice Issues for the Physical Therapist Assistant	2	4	4
PTA	258	Level II Clinical Education A	0	24	8
			2	28	12

Quarter VI

Course	No.	Course Title	C	L	T
PTA	260	Senior Capstone	2	4	4
PTA	268	Level II Clinical Education B	0	24	8
			2	28	12

Intersession (This will vary depending on the start date)

Course	No.	Course Title	C	L	T
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	*4*	*0*	*4*
EN	*102*	*Critical Thinking and College Writing (COM Core)*	*4*	*0*	*4*
			8	0	8

Total Quarter Credit Hours = 103

Legend

C = Number of lecture hours per week

L = Number of laboratory hours per week

T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one credit depending on the expected amount of pre- or post-lab work.

**3 Clinical Education Hours =1 Quarter Credit Hour

PLEASE NOTE: All liberal arts core courses are listed in italics.

All associate degree students are required to take 32 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses. Students who place out of EN 101 (or EN 110) or EN 102 must still take 32 credits of core courses.

Level 1 Clinical Education offered in Quarters 3 and 4 for a total of 90 hours. The first Level II Clinical Education begins in Quarter 5 during the 5th week of the quarter. The second Level II Clinical Education begins in Quarter 6. Each Clinical Education experience includes full-time placement in a facility for 6 weeks for each placement; for a total of 12 weeks.

PLEASE NOTE: Students in the Physical Therapist Assistant program must achieve a grade of C+ or better in all required PTA, BIO, and HS courses, a grade of C or better in all general education courses, and a cumulative grade point average of at least 2.33 throughout the program in order to be in good standing.

*Students considering a Bachelor of Science Degree in Business Management need to take Effective Teams and Projects (MGM 105), Accounting Fundamentals (MGM 130), Introduction to Business Analysis and Reporting (MGM 131), Small Business and the Law (BU 236), and Applied Math for Business (MA 200) or Technical Math I (MA 125) or their equivalents either during their associate degree program or during a pre-requisite quarter. See your student advisor to schedule these courses.

Associate in Science Degree

The Associate in Science Degree in Plumbing and Heating Technology is a program offered jointly through the Plumbing Department and the Heating Department.

Plumbing/Heating is a comprehensive program designed to train students as entry-to-industry level technicians. Students are taught the basic theory and practices of plumbing and heating and receive hands-on experience in a laboratory setting. The program offers a curriculum combining two distinct but interconnected areas: heating in residential structures and plumbing in residential, commercial, and industrial structures.

The four-quarter plumbing portion of the program includes the study of basic tools; methods of fabrication; fitting identification and usage; drainage; waste and venting; water piping methods and design; sewage disposal and treatment; water sources and distribution; and household and industrial maintenance. Sustainability issues using rainwater harvesting and gray water technology are stressed.

In the three-quarter heating portion of the program, various gas- and oil-fired heating systems are examined such as steam, warm air, and forced hot water. Also presented are the burners used in conjunction with these systems and their associated control circuitry. Special consideration is given to electrical wiring, heat loss calculations, and system design as they relate to a residential application. Topics in the use of biofuels and a study of solar technology are also covered.

The theory and lab experience includes the design, installation, troubleshooting, and servicing of a vast array of heating units.

Graduates are prepared for technician positions in the plumbing and heating industry. In addition, after completing certain prerequisites*, graduates of this program area are eligible to continue on for a Bachelor of Science Degree in Business Management.

Plumbing and Heating Technology
Associate in Science Degree

Quarter I

Course	No.	Course Title	C	L	T
PL	114	Pipe Fitting Basics	4	0	4
PL	117	Pipe Fitting Basics Lab	2	4	3
PL	118	Blueprint Reading and Drafting	3	0	3
		CHOOSE ONE *(depending upon Math placement)*			
MA	*100/110*	*Introduction to College Math (MA/SCI Core)*	*4*	*0*	*4*
-or-					
MA	*125*	*Technical Math I (MA/SCI Core)*			
			13	4	14

Quarter II

Course	No.	Course Title	C	L	T
PL	124	Drainage, Waste and Vent Design	4	0	4
PL	123	Drainage, Waste, and Vent and Potable Water System Lab	2	4	3
PL	126	Potable Water Piping Design	3	0	3
		CHOOSE ONE *(depending upon Quarter I)*			
MA	*125*	*Technical Math I (MA/SCI Core)*	*4*	*0*	*4*
-or-					
ELECTIVE		*Math/Science Core*			
		CHOOSE ONE *(depending upon English placement)*			
EN	*101*	*Introduction to Writing and Workplace Communication (COM Core)*	*4*	*0*	*4*
-or-					
EN	*102*	*Critical Thinking and College Writing (COM Core)*			
			17	4	18

Quarter III

Course	No.	Course Title	C	L	T
PL	230	Plumbing Fixture, Appliance and Appurtenance	4	0	4
PL	233	Plumbing System Design and Fixture Installation Lab	2	4	3
PL	232	Troubleshooting and Repair	1	2	2
AH	123	Basic Electricity	2	3	3
		CHOOSE ONE *(depending upon Quarter II)*			
EN	*102*	*Critical Thinking and College Writing (COM Core)*	*4*	*0*	*4*
-or-					
ELECTIVE		*Communications Core*			
			13	9	16

Quarter IV

Course	No.	Course Title	C	L	T
PL	240	Pump System Design	4	0	4
PL	243	Pump System Design Lab	2	4	3
PL	242	Final Project	2	2	3
BU	*236*	*Small Business and the Law (SS Core)*	*4*	*0*	*4*
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	*4*	*0*	*4*
			16	6	18

Quarter V

Course	No.	Course Title	C	L	T
AH	220	Basic Heating	9	0	9
AH	222	Basic Heating Lab	0	8	2
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	*4*	*0*	*4*
			13	8	15

Quarter VI

Course	No.	Course Title	C	L	T
AH	230	Heating Systems Theory	9	0	9
AH	232	Heating Systems Lab	0	8	2
ELECTIVE		*Social Sciences Core*	*4*	*0*	*4*
			13	8	15

Quarter VII

Course	No.	Course Title	C	L	T
AH	226	Gas Technology	9	0	9
AH	228	Gas Technology Lab	0	8	2
			9	8	11

Total Quarter Credit Hours = 107

Legend

C = Number of lecture hours per week
L = Number of laboratory hours per week
T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one credit depending on the expected amount of pre- or post-lab work.

PLEASE NOTE: All liberal arts core courses are listed in italics.

All associate degree students are required to take 32 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses. Students who place out of EN 101, EN 102 or MA 100/110 must still take 32 credits of core courses.

*Students considering a Bachelor of Science Degree in Business Management need to take Effective Teams and Projects (MGM 105), Accounting Fundamentals (MGM 130), Introduction to Business Analysis and Reporting (MGM 131), Small Business and the Law (BU 236), and Applied Math for Business (MA 200) or Technical Math I (MA 125) or their equivalents either during their associate degree program or during a prerequisite quarter. See your student advisor to schedule these courses.

Associate in Science Degree

The Associate in Science Degree in Refrigeration/Air Conditioning/Heating (RACH) is offered jointly by the Refrigeration and Air Conditioning Department and the Heating Department.

Refrigeration/Air Conditioning/Heating (RACH) is a comprehensive program designed to train students as entry-to-industry level technicians. The program offers a curriculum combining two distinct but interrelated areas dealing with heat energy and its transfer. The curriculum includes both the theoretical and practical aspects of heating and cooling.

The course content of the program includes the basic theory of heat flow and its control and the methods used to make heat flow to either cool or heat a specific area. Instruction in the refrigeration and air conditioning field begins with the basic domestic refrigerator and progresses to the most complex commercial refrigeration and air conditioning systems over the course of four ten-week quarters. Topics in ground source geothermal and the use of heat pumps are also covered.

In the three-quarter heating portion of the program, various gas- and oil-fired heating systems are examined such as steam, warm air, and forced hot water. Also presented are the burners used in conjunction with these systems and their associated control circuitry. Special consideration is given to electrical wiring, heat loss calculations and system design as they relate to a residential application. Topics in the use of biofuels and a study of solar technology are also covered.

All parts of the RACH program contain intensive instruction in the mechanical and electrical control devices used in heating and cooling systems. Students receive comprehensive training in troubleshooting and service call procedures for both the heating and refrigeration/air conditioning portions of the program.

Graduates are prepared for positions as technicians in the refrigeration, air conditioning, and heating fields. In addition, after completing certain prerequisites*, graduates of this program are eligible to continue on for a Bachelor of Science Degree in Business Management.

Refrigeration/Air Conditioning/Heating Technology
Associate in Science Degree

Quarter I

Course	No.	Course Title	C	L	T
AH	110	Basic Refrigeration	7	0	7
AH	112	Basic Refrigeration Lab	2	4	3
AH	123	Basic Electricity	2	3	3
			11	7	13

Quarter II

Course	No.	Course Title	C	L	T
AH	120	Basic Refrigeration Electricity	7	0	7
AH	124	Basic Refrigeration Electricity Lab	2	4	3
		CHOOSE ONE *(depending upon Math placement)*			
MA	*100/110*	*Introduction to College Math (MA/SCI Core)*	*4*	*0*	*4*
-or-					
MA	*125*	*Technical Math I (MA/SCI Core)*			
-or-					
MA	*121*	*Business Math (MA/SCI Core)*			
		CHOOSE ONE *(depending upon English placement)*			
EN	*101*	*Introduction to Writing and Workplace Communication (COM Core)*	*4*	*0*	*4*
-or-					
EN	*102*	*Critical Thinking and College Writing (COM Core)*			
			17	4	18

Quarter III

Course	No.	Course Title	C	L	T
AH	130	Commercial Refrigeration	7	0	7
AH	132	Commercial Refrigeration Lab	2	4	3
		CHOOSE ONE *(depending upon Quarter II)*			
MA	*125*	*Technical Math I (MA/SCI Core)*	*4*	*0*	*4*
-or-					
MA	*121*	*Business Math (MA/SCI Core)*			
-or-					
ELECTIVE		*Social Sciences Core*			
		CHOOSE ONE *(depending upon Quarter II)*			
EN	*102*	*Critical Thinking and College Writing (COM Core)*	*4*	*0*	*4*
-or-					
ELECTIVE		*Communications Core*			
			17	4	18

Quarter IV

Course	No.	Course Title	C	L	T
AH	210	Air Conditioning	7	0	7
AH	213	Air Conditioning Lab	2	4	3
AH	212	Refrigeration Technician Certification	2	0	2
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	*4*	*0*	*4*
			15	4	16

Quarter V

Course	No.	Course Title	C	L	T
AH	220	Basic Heating	9	0	9
AH	222	Basic Heating Lab	0	8	2
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	*4*	*0*	*4*
			13	8	15

Quarter VI

Course	No.	Course Title	C	L	T
AH	230	Heating Systems Theory	9	0	9
AH	232	Heating Systems Lab	0	8	2
ELECTIVE		*Social Sciences Core*	*4*	*0*	*4*
			13	8	15

Quarter VII

Course	No.	Course Title	C	L	T
AH	226	Gas Technology	9	0	9
AH	228	Gas Technology Lab	0	8	2
ELECTIVE		*Social Sciences Core*	*4*	*0*	*4*
			13	8	15

Total Quarter Credit Hours = 110

Legend

C = Number of lecture hours per week
L = Number of laboratory hours per week
T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one-credit depending on the expected amount of pre- or post-lab work.

PLEASE NOTE: All liberal arts core courses are listed in italics.

All associate degree students are required to take 32 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses. Students who place out of EN 101, EN 102 or MA 100/110 must still take 32 credits of core courses.

*Students considering a Bachelor of Science Degree in Business Management need to take Effective Teams and Projects (MGM 105), Accounting Fundamentals (MGM 130), Introduction to Business Analysis and Reporting (MGM 131), Small Business and the Law (BU 236), and Applied Math for Business (MA 200) or Technical Math I (MA 125) or their equivalents either during their associate degree program or during a prerequisite quarter. See your student advisor to schedule these courses.

Associate in Science Degree

The Associate in Science degree program in Respiratory Care prepares students to pursue a career as a highly-skilled, critical thinking, Respiratory Therapist (RT). RTs assess, treat, and monitor patients with disorders of the cardiopulmonary system. Practicing under the guidance of a physician, RTs perform a wide array of diagnostic and therapeutic procedures on adult, pediatric, and newborn patients.

Typical responsibilities for an RT include interviewing and examining patients with breathing problems, performing diagnostic studies such as obtaining and analyzing arterial blood gases, pulmonary function testing, hemodynamic monitoring, and polysomnography. RTs administer aerosolized medications, initiate mechanical ventilation, perform bronchopulmonary hygiene, maintain airway patency, and provide cardiopulmonary resuscitation.

RTs play an integral role in the development and monitoring of a patient's cardiopulmonary treatment plan. RTs utilize evidence-based medicine to educate patients, families, and the community regarding cardiopulmonary wellness, disease prevention and management.

RTs work in a variety of healthcare environments such as hospitals, long-term care facilities, rehabilitation centers, skilled nursing facilities, homecare agencies, sleep disorder centers, clinical transport operations, physicians' offices, wellness clinics, educational institutions, traveling agencies, and medical equipment sales and service providers.

Through the combination of classroom, laboratory, and hands-on clinical experiences, students will be provided the opportunity to apply their knowledge and create real-world understanding. Upon successful completion of the entire course of study, graduates will be eligible to sit for the entry-level Certified Respiratory Therapist (CRT) exam administered by the National Board for Respiratory Care (NBRC). An individual must pass this examination to be eligible for state licensure and to qualify to take the advanced-level Registered Respiratory Therapist (RRT) exam administered by the NBRC. In addition, after completing certain prerequisites*, graduates of this program are eligible to continue on for a Bachelor of Science Degree in Business Management.

ACCREDITATION STATUS

The Respiratory Care program at New England Institute of Technology holds Provisional Accreditation from the Commission on Accreditation for Respiratory Care (www.coarc.com). This status signifies that a program that has been granted an Approval of Intent has demonstrated sufficient compliance to initiate a program in accordance with the Standards through the completion and submission of an acceptable Self Study Report (SSR), and other documentation required by the CoARC Board. The conferral of Provisional Accreditation denotes a new program that has made significant progress towards meeting the Standards of Accreditation. The program will remain on Provisional Accreditation until achieving Initial Accreditation. It is recognized by the National Board for Respiratory Care (NBRC) toward eligibility to the Respiratory Care Credentialing Examination(s). Enrolled students completing the program under Provisional Accreditation are considered graduates of a CoARC accredited program.

The New England Institute of Technology holds Provisional Accreditation from the Commission on Accreditation for Respiratory Care (www.coarc.com).

Commission on Accreditation For Respiratory Care
1248 Harwood Road, Bedford, Texas 76021-4244
(817) 283-2835

Respiratory Care
Associate in Science Degree

Quarter I

Course	No.	Course Title	C	L	T
RC	110	Foundations of Respiratory Care	3	2	4
RC	111	Introduction to Respiratory Care Clinical	1	2	2
BIO	100	Anatomy & Physiology I	4	0	4
BIO	101	Anatomy & Physiology I Lab	0	4	2
MA	*109*	*Math for Life Science (MA/SCI Core)*	*4*	*0*	*4*
			12	8	16

Quarter II

Course	No.	Course Title	C	L	T
RC	120	Principles of Cardiopulmonary Physiology	3	0	3
RC	121	Respiratory Care Pharmacology	1	2	2
BIO	120	Anatomy & Physiology II	4	0	4
BIO	121	Anatomy & Physiology II Lab	0	4	2
EN	*110*	*Healthcare Communication Skills (COM core)*	*4*	*0*	*4*
			12	6	15

Quarter III

Course	No.	Course Title	C	L	T
RC	130	Theory & Application of Respiratory Care I & Lab	3	4	5
RC	131	Respiratory Care Clinical I	0	12	4
RC	132	Respiratory Care Pathophysiology I	3	0	3
BIO	*122*	*Microbiology (MA/SCI Core)*	*3*	*2*	*4*
		CHOOSE ONE *(depending upon Quarter II)*			
EN	*102*	*Critical Thinking and College Writing (COM Core)*	*4*	*0*	*4*
-or-					
ELECTIVE		*Communications Core*			
			13	18	20

Intersession

Course	No.	Course Title	C	L	T
PS	*202*	*Psychology of Healthcare (SS Core)*	*4*	*0*	*4*
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	*4*	*0*	*4*
			8	0	8

Quarter IV

Course	No.	Course Title	C	L	T
RC	240	Theory & Application of Respiratory Care II & Lab	3	4	5
RC	241	Respiratory Care Clinical II	0	12	4
RC	242	Respiratory Care Pathophysiology II	3	0	3
PS	*210*	*Human Relations in the Workplace (SS Core)*	*4*	*0*	*4*
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	*4*	*0*	*4*
			14	16	20

Quarter V

Course	No.	Course Title	C	L	T
RC	252	Theory & Application of Respiratory Care III & Lab	3	4	5
RC	253	Respiratory Care Clinical III	0	18	6
RC	254	Specialty Principles & Practice of Respiratory Care	2	0	2
			5	22	13

Quarter VI

Course	No.	Course Title	C	L	T
RC	261	Theory & Application of Respiratory Care IV & Lab	3	4	5
RC	262	Respiratory Care Clinical IV	0	24	8
			3	28	13

Total Quarter Credit Hours = 105

Legend

C = Number of lecture hours per week
L = Number of laboratory/clinical hours per week
T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one credit depending on the expected amount of pre- or post-lab work.

PLEASE NOTE: All liberal arts core courses are listed in italics.

All associate degree students are required to take (or transfer) 32 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses. Students who place out of EN 101, EN 102 or MA 100/110 must still take 32 credits of core courses.

*Students considering a Bachelor of Science Degree in Business Management need to take Effective Teams and Projects (MGM 105), Accounting Fundamentals (MGM 130), Introduction to Business Analysis and Reporting (MGM 131), Small Business and the Law (BU 236), and Applied Math for Business (MA 200) or Technical Math I (MA 125) or their equivalents either during their associate degree program or during a prerequisite quarter. See your student advisor to schedule these courses.

Bachelor of Science Degree

The RN to BSN program at NEIT allows the Registered Nurse with an earned associate degree or nursing diploma, and an active unencumbered license, to continue his/her education and earn a Bachelor of Science Degree in Nursing (BSN) entirely online. Baccalaureate-prepared nurses advance the profession of nursing, improve the quality of patient care, and contribute to the well-being of the community. Reasons for pursuing the baccalaureate degree vary. Students who decide to pursue a BSN may be ready to assume more professional responsibility, pursue a position that requires a BSN or to prepare for graduate school. Whatever the reason, the RN to BSN program at NEIT is designed to help students reach their professional goals.

Material covered integrates clinical decision-making and health care informatics with the role of the registered nurse. Courses include the theory and research-based knowledge in the provision of care to the client, family, and community in a global society with flexibility to adapt to the changing nature of healthcare and healthcare roles. Students also learn how to integrate care across multiple settings, managing the interactions between and among components of the integrated network of healthcare services. Graduates will be prepared for positions in primary care, community health settings, acute care, rehabilitation, and long-term care facilities.

ACCREDITATION STATUS

The RN to Bachelor of Science Degree in Nursing program is accredited by the Accreditation Commission for Education in Nursing (ACEN).

Accreditation Commission for Education in Nursing
3343 Peachtree Road NE
Suite 850
Atlanta, Georgia 30326
Telephone: (404) 975-5000
FAX: (404) 975-5020
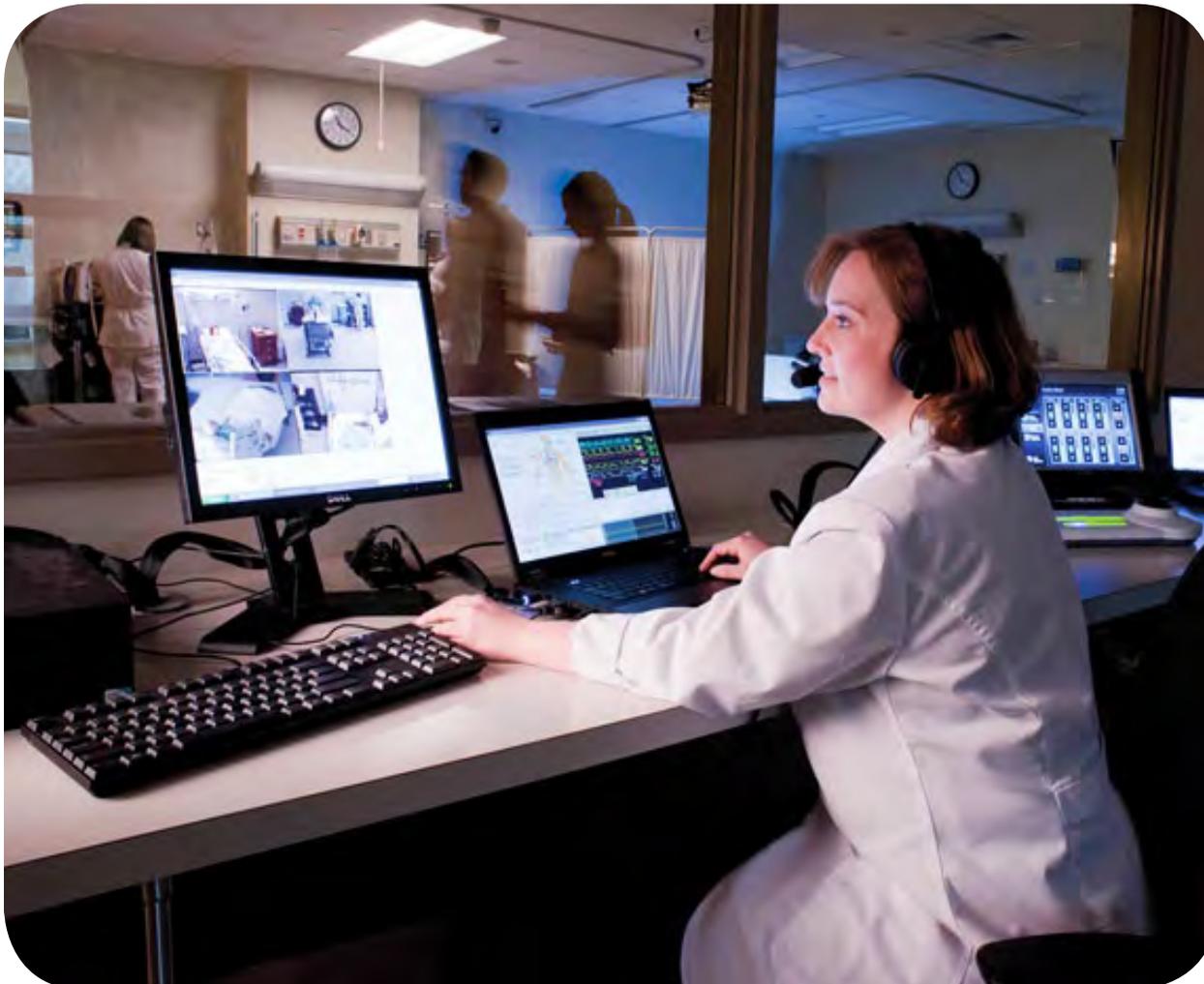
RN to BSN
Bachelor of Science Degree

SAMPLE PART-TIME PLAN OF STUDY

The RN to BSN program may be completed in two years of part-time study. Course Schedule subject to change.

Quarter I

Course	No.	Course Title	C	L	T
NUR	370	Concepts of Professional Nursing	3	0	3
EN	331	Research Writing	4	0	4
			7	0	7

Quarter II

Course	No.	Course Title	C	L	T
NUR	384	Health Policy, Finance, and Regulation	4	0	4
BIO	374	Pathophysiology: A Clinical Approach (MA/SCI Core)	4	0	4
			8	0	8

Quarter III

Course	No.	Course Title	C	L	T
NUR	378	Health Assessment Across the Lifespan	4	0	4
ELECTIVE		Math/Science Core	4	0	4
			8	0	8

Summer Intersession

Course	No.	Course Title	C	L	T
ELECTIVE		Humanities Core	4	0	4

Quarter IV

Course	No.	Course Title	C	L	T
NUR	388	Informatics and Healthcare Technology	4	0	4
NUR	390	Ethical Issues in Nursing	3	0	3
			7	0	7

Quarter V

Course	No.	Course Title	C	L	T
NUR	394	Quality and Safety	4	0	4
EN	422	Writing in the Health Sciences (COM Core)	4	0	4
			8	0	8

Quarter VI

Course	No.	Course Title	C	L	T
NUR	398	Nursing Research and Evidence-Based Practice	4	0	4
PS	410	Applied Research Statistics (SS Core)	4	0	4
			8	0	8

Quarter VII

Course	No.	Course Title	C	L	T
NUR	420	Principles of Prevention and Population Health	4	3	5
NUR	440	Leadership and Management	3	3	4
			7	6	9

Quarter VIII

Course	No.	Course Title	C	L	T
NUR	490	Capstone Practicum	2	6	4
ELECTIVE		Social Sciences, Humanities or Arts/Foreign Language Core	4	0	4
			6	6	8

Total Quarter Credit Hours = 67

A minimum of 180 quarter credits are required to complete the RN-BSN program, and are calculated as follows: Up to 113 potential transfer credits from the student's associate degree or diploma in nursing (includes 55 credits for basic nursing knowledge); and, 67 RN to BSN Program credits (39 Nursing credits and 28 liberal arts credits).

A minimum of 34 credits must be completed at NEIT.

Legend

C = Number of lecture hours per week
L = Number of laboratory /clinical hours per week
T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one credit depending on the expected amount of pre- or post-lab work.

PLEASE NOTE: All liberal arts core courses are listed in italics.

Please Note: NUR 370 is the required first nursing course and NUR 490 must be the last course taken. The remaining courses may be taken in any sequence with the following exceptions:
• EN 331 Research Writing must be taken no later than the second quarter.
• BIO 374 is a prerequisite to NUR 378 Health Assessment Across the Lifespan.
• All 300-level Nursing courses must be taken before 400-level Nursing courses.
• PS 410 Applied Research Statistics is a prerequisite or co-requisite to NUR 398: Nursing Research and Evidence-Based Practice.

Associate in Science Degree

The Associate in Science Degree in Surgical Technology prepares practitioners specifically for the operating room scrub role. During operative procedures, the surgical technologist functions as an integral part of the surgical team and works in cooperation with the surgeon, anesthesiologist, and registered nurse performing duties that are vital for the safety and care of surgical patients. Responsibilities include preparation of sterile operative equipment and supplies, instrumentation during operative procedures, and other intra-operative patient care activities. Common duties include operating sterilizers, lights, suction machines, electrosurgical units and laparoscopic equipment as well as preparing the patient's surgical site.

In the Surgical Technology curriculum, theory and practice are integrated through the use of laboratory experiences in a completely equipped, on-campus simulated operating room and in actual operating rooms. Comprehensive background in anatomy and physiology is studied along with the proper medical terminology of the systems. An appreciation of the person having surgery, knowledge of common conditions requiring surgery and the surgical procedure as well as skills of patient care are included in surgical procedures classes. Ethical and legal dimensions of the work and profession of the Surgical Technologist are part of the program. Supervised clinical practice in surgical environments prepares students realistically.

Graduates are prepared for entry-level positions in such areas as hospital operating room departments, obstetrical departments, surgical supply/processing departments, outpatient surgical centers, and surgeon office practices. In addition, after completing certain prerequisites*, graduates of this program are eligible to continue on for a Bachelor of Science Degree in Business Management.

ACCREDITATION STATUS

The Surgical Technology program of study is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP). Upon completion of the program, graduates are eligible to take the National Certification Exam administered by The National Board of Surgical Technology and Surgical Assisting (NBSTSA).

Commission on Accreditation of Allied Health Education Programs (CAAHEP) 1361 Park Street, Clearwater, Florida 33756, Telephone (727) 210-2350

Surgical Technology
Associate in Science Degree

Quarter I

Course	No.	Course Title	C	L	T
ST	101	Introduction to Surgical Technology	2	2	3
MGM	102	Word Processing (5 weeks)	.5	1	1
BIO	100	Anatomy and Physiology I (MA/SCI Core)	4	0	4
BIO	101	Anatomy and Physiology I Lab (MA/SCI Core)	0	4	2
HS	102	Introduction to Allied Health (MA/SCI Core)	2	0	2
		CHOOSE ONE (depending upon English placement)			
EN	101	Introduction to Writing and Workplace Communication (COM Core)	4	0	4
-or-					
EN	102	Critical Thinking and College Writing (COM Core)			
			12.5	7	16

Quarter II

Course	No.	Course Title	C	L	T
ST	120	Surgical Instrumentation	1	2	2
BIO	122	Microbiology	3	2	4
BIO	120	Anatomy & Physiology II (MA/SCI Core)	4	0	4
BIO	121	Anatomy & Physiology II Lab (MA/SCI Core)	0	4	2
		CHOOSE ONE (depending upon Math placement)			
MA	109	Math for Life Science (MA/SCI Core)	4	0	4
-or-					
ELECTIVE		Math/Science Core			
		CHOOSE ONE (depending upon Quarter I)			
EN	102	Critical Thinking and College Writing (COM Core)	4	0	4
-or-					
ELECTIVE		Communications Core			
			16	8	20

Quarter III

Course	No.	Course Title	C	L	T
ST	130	Surgical Procedures I	4	0	4
ST	131	Surgical Procedures I Lab	0	6	3
BIO	130	Pharmacology	3	0	3
BIO	131	Pathophysiology	2	0	2
PS	201	Introduction to Psychology (SS Core)	4	0	4
			13	6	16

Mandatory Intersession

Course	No.	Course Title	C	L	T
ELECTIVE		Humanities (or Arts/Foreign Language) Core	4	0	4
			4	0	4

Quarter IV

Course	No.	Course Title	C	L	T
ST	200	Surgical Procedures II	4	0	4
ST	201	Surgical Procedures II Lab (5 weeks)	0	6	3
ST	203	Professional Communication Skills (5 weeks)	1	0	1
ST	204	Operating Room Laboratory I** (5 weeks)	0	12	4
HS	201	Introduction to Medical Ethics and Bioethics	3	0	3
ELECTIVE		Humanities (or Arts/Foreign Language) Core	4	0	4
			12	18	19

Quarter V

Course	No.	Course Title	C	L	T
ST	205	Advanced Topics in Surgical Technology	1	0	1
ST	220	Surgical Procedures III	4	0	4
ST	222	Operating Room Laboratory II**	0	24	8
ST	223	Surgical Seminar I	1	0	1
			6	24	14

Quarter VI

Course	No.	Course Title	C	L	T
ST	230	Operating Room Laboratory III** (5 weeks)	0	12	4
ST	232	Advanced Applications of Surgical Technology	6	0	6
ST	233	Surgical Seminar II (5 weeks)	2	0	2
			8	12	12

Total Quarter Credit Hours = 101

Optional Courses – To be taken at Department Chair's Discretion
The credits for ST 98/ST99 do not count for degree requirements.

Course	No.	Course Title	C	L	T
ST	99	Clinical Review	0	6	3
ST	98	Advanced Clinical Review	0	6	3

Legend

C = Number of lecture hours per week
L = Number of laboratory hours per week
T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one credit depending on the expected amount of pre- or post-lab work.

**3 clinical lab hours = 1 Quarter Hour Credit OR Practicum Hours reflect 60 minute clock hours.

PLEASE NOTE: All liberal arts core courses are listed in italics.

All Associate Degree students are required to take 32 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses. Students who place out of EN 101, EN 102 or MA 109 must still take 32 credits of core courses.

PLEASE NOTE:
For all quarters, a grade of C+ or better must be attained in BIO and ST courses in order to advance to the next quarter. A cumulative grade point average of at least 2.33 in all courses must be maintained throughout the program.

Students are required to complete all of the 1st academic year courses, including liberal arts courses, to progress to the 2nd academic year when actual hospital-based operating room experience begins.

*Students considering a Bachelor of Science Degree in Business Management need to take Effective Teams and Projects (MGM 105), Accounting Fundamentals (MGM 130), Introduction to Business Analysis and Reporting (MGM 131), Small Business and the Law (BU 236), and Applied Math for Business (MA 200) or Technical Math I (MA 125) or their equivalents either during their Associate Degree program or during a prerequisite quarter. See your student advisor to schedule these courses.

Associate in Science Degree

The Associate in Science in Veterinary Practice Management (VPM) is a six-quarter program designed to teach the management skills necessary to run a veterinary practice as well as to offer enough required credits for students who choose to sit for the national veterinary practice manager certification test.

Veterinary practice managers are responsible for the day-to-day operations of veterinary practice. Often, they supervise front desk employees, coordinate hiring processes, assess health care plans and human resource issues, and interact with customers/clients on a variety of issues. In practices where there is a retail component, the Veterinary Practice Manager will often oversee inventory and work directly with distributors.

This program will combine very basic veterinary knowledge such as basic anatomy and physiology and pharmacology as well as management skills including human resources, customer service, legal and ethical issues, and practice management.

Graduates of the Veterinary Practice Management program will have the skills and educational requirements necessary to run a small to medium sized multi-veterinary practice, to work as a mid-level manager in a large veterinary hospital, and to work in sales and marketing in the veterinary or veterinary pharmacology fields. In addition, after completing certain prerequisites*, graduates of this program are eligible to continue on for a Bachelor of Science Degree in Business Management.

Veterinary Practice Management
Associate in Science Degree

Quarter I

Course	No.	Course Title	C	L	T
VET	110	Introduction to Veterinary Technology	4	0	4
VPM	112	Anatomy and Physiology for Practice Managers	2	3	3
MGM	105	Effective Teams and Projects	2	2	3
		CHOOSE ONE *(depending upon Math placement)*			
MA	*100/110*	*Introduction to College Math (MA/SCI Core)*	*4*	*0*	*4*
-or-					
MA	*121*	*Business Math (MA/SCI Core)*			
			12	5	14

Quarter II

Course	No.	Course Title	C	L	T
VET	120	Animal Management	4	0	4
MGM	125	Principles of Management	2	2	3
MGM	130	Accounting Fundamentals	3	2	4
		CHOOSE ONE *(depending upon English placement)*			
EN	*101*	*Introduction to Writing and Workplace Communication (COM Core)*	*4*	*0*	*4*
-or-					
EN	*102*	*English II*			
			13	4	15

Quarter III

Course	No.	Course Title	C	L	T
VPM	111	Healthcare Communications Skills	4	0	4
VPM	115	Pharmacology for Practice Managers	2	0	2
VPM	200	Small Animals and Society	4	0	4
		CHOOSE ONE *(depending upon Quarter II)*			
EN	*102*	*Critical Thinking and College Writing (COM Core)*	*4*	*0*	*4*
-or-					
ELECTIVE		*Communications Core*			
			14	0	14

Quarter IV

Course	No.	Course Title	C	L	T
VPM	203	Principles of Economics	4	0	4
VPM	220	Veterinary Practice Management I	3	0	3
VPM	253	Internet Marketing and Branding	2	3	3
ELECTIVE		*Humanities Core*	*4*	*0*	*4*
			13	3	14

Intersession

Course	No.	Course Title	C	L	T
ELECTIVE		*Social Sciences Core*	*4*	*0*	*4*
		CHOOSE ONE *(depending upon Math placement)*			
MA	*121*	*Business Math (MA/SCI Core)*	*4*	*0*	*4*
-or-					
ELECTIVE		*Mathematics/Science Core*			
			8	0	8

Quarter V

Course	No.	Course Title	C	L	T
VPM	222	Veterinary Practice Management II	3	0	3
VPM	240	Human Resources and Personnel Management	3	0	3
VPM	250	Practicum	0	12	4
ELECTIVE		*Humanities Core*	*4*	*0*	*4*
			10	12	14

Quarter VI

Course	No.	Course Title	C	L	T
VPM	230	Customer Service in the Veterinary Practice	3	0	3
VPM	245	Legal Issues in Veterinary Practice	4	0	4
VPM	251	Ethics and Humane Principles in the Veterinary Practice	4	0	4
ELECTIVE		*Social Sciences Core*	*4*	*0*	*4*
			15	0	15

Total Quarter Credit Hours = 94

Legend

C = Number of lecture hours per week
L = Number of laboratory hours per week
T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one credit depending on the expected amount of pre- or post-lab work.

PLEASE NOTE: All liberal arts core courses are listed in italics.

All associate degree students are required to take 32 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses. Students who place out of EN 101, EN 102 or MA 100/110 must still take 32 credits of core courses.

*Students considering a Bachelor of Science Degree in Business Management need to take Effective Teams and Projects (MGM 105), Accounting Fundamentals (MGM 130), Introduction to Business Analysis and Reporting (MGM 131), Small Business and the Law (BU 236), and Applied Math for Business (MA 200) or Technical Math I (MA 125) or their equivalents either during their Associate Degree program or during a prerequisite quarter. See your student advisor to schedule these courses.

Associate in Science Degree

The Associate in Science in Veterinary Technology prepares students as entry-level veterinary technicians. These students are provided with the educational foundation necessary to develop the required critical thinking, managerial, and clinical professional skills necessary to perform as effective members of the veterinary healthcare team.

Veterinary technology is the science and art of providing professional support to veterinarians. Veterinary technicians provide professional health care for animals under the supervision of a veterinarian. Examples of areas of responsibility for veterinary technicians include surgical assisting, anesthesiology, radiology, caring for hospitalized patients, administering vaccines and medications, dental prophylaxis, collecting specimens and performing clinical laboratory procedures, client education, physical examination and patient history, and office/hospital management. Veterinary technicians cannot diagnose, prescribe, or perform surgery.

Throughout the curriculum, students are exposed to veterinary team concepts and appropriate modeling of professional and ethical conduct. There are planned laboratory and clinical practice experiences that expand student knowledge and lead to proficiency in task-specific essential and recommended skills for the entry-level veterinary technician.

ACCREDITATION STATUS

The Veterinary Technology program is accredited by the American Veterinary Medical Association (AVMA) as a program for educating veterinary technicians.

American Veterinary Medical Association (AVMA)
Committee on Veterinary Technician Education and Activities (CVTEA)
Education and Research Division
1931 N. Meacham Rd., Suite 100, Schaumburg, IL 60173-4630
(800) 248-2862 ext. 6624
www.avma.org

Veterinary Technology
Associate in Science Degree

Quarter I

Course	No.	Course Title	C	L	T
VET	110	Introduction to Veterinary Technology	4	0	4
VET	112	Veterinary Anatomy & Physiology I	3	0	3
VET	113	Veterinary Anatomy & Physiology I Lab	0	3	1
BIO	116	Introduction to Biology	3	2	4
		CHOOSE ONE *(depending upon Math placement)*			
MA	*109*	*Math for Life Science (MA/SCI Core)*	*4*	*0*	*4*
		-or-			
CHM	*101*	*Life Science Chemistry (MA/SCI Core)*	*3*	*2*	*4*
			13/14	5/7	16

Quarter II

Course	No.	Course Title	C	L	T
VET	120	Animal Management	4	0	4
VET	122	Veterinary Anatomy & Physiology II	3	0	3
VET	123	Veterinary Anatomy & Physiology II Lab	0	3	1
EN	*110*	*Healthcare Communication Skills (COM Core)*	*4*	*0*	*4*
		CHOOSE ONE *(depending upon Math placement)*			
CHM	*101*	*Life Science Chemistry (MA/SCI Core)*	*3*	*2*	*4*
		-or-			
ELECTIVE		*Math/Science Core*	*4*	*0*	*4*
			14/15	3/5	16

Intersession

Course	No.	Course Title	C	L	T
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	*4*	*0*	*4*
EN	*102*	*Critical Thinking and College Writing (COM Core)*	*4*	*0*	*4*
			8	0	8

Quarter III

Course	No.	Course Title	C	L	T
VET	130	Veterinary Pharmacology	3	0	3
VET	137	Laboratory Animal Technology and Lab	2	3	3
VET	250	Large Animal Nursing Laboratory	0	3	1
BIO	122	Microbiology	3	2	4
ELECTIVE		*Social Sciences Core*	*4*	*0*	*4*
			12	8	15

Quarter IV

Course	No.	Course Title	C	L	T
VET	240	Animal Diseases	4	0	4
VET	242	Animal Nursing	4	0	4
VET	243	Small Animal Nursing Lab	0	3	1
VET	244	Veterinary Anesthesia and Dentistry Lab	0	3	1
ELECTIVE		*Humanities Core*	*4*	*0*	*4*
ELECTIVE		*Social Sciences Core*	*4*	*0*	*4*
			16	6	18

Quarter V

Course	No.	Course Title	C	L	T
VET	254	Veterinary Anesthesia and Surgical Nursing and Lab	4	3	5
VET	138	Veterinary Practicum I	0	6	2
VET	248	Veterinary Practicum II	0	6	2
VET	262	Veterinary Clinical Laboratory Procedures	4	0	4
VET	263	Veterinary Clinical Laboratory Procedures Lab	0	3	1
			8	18	14

Quarter VI

Course	No.	Course Title	C	L	T
VET	252	Veterinary Imaging	3	0	3
VET	253	Veterinary Imaging Laboratory	0	3	1
VET	258	Veterinary Practicum III	0	6	2
VET	260	Veterinary Management	3	3	4
VET	268	Veterinary Practicum IV	0	6	2
			6	18	12

Total Quarter Credit Hours = 99

Legend

C = Number of lecture hours per week

L = Number of laboratory / practicum hours per week

T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one credit depending on the expected amount of pre- or post-lab work.

PLEASE NOTE: All liberal arts core courses are listed in italics.

All associate degree students are required to take a minimum of 32 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses. Students who place out of EN 110, EN 102 or MA 109 must still take 32 credits of core courses.

Bachelor of Science Degree

The Video Game Development and Design Program has two bachelor's degree tracks: Game Development and Simulation Programming and Video Game Design.

VIDEO GAME DESIGN

The bachelor's degree program in Video Game Design will prepare students for entry-level and intermediate level careers in game design, animation and visualization as well as for entry-level and intermediate level positions in a variety of digital media production environments. Building on the skills and knowledge acquired in the associate degree program, students will learn and refine advanced design and development skills utilized in the game industry. Students will be immersed in high-level programs, concepts and design challenges that will aid in their development of communications skills, refine their mastery of 2D and 3D animation concepts and introduce them to new technologies and trends in the industry. An important component of the curriculum is assembling a portfolio that will include game assets developed by students. Graduates from this program will be eligible for entry-level to intermediate level positions such as game designer, character artist, environmental artist, technical artist, level designer, and visual effects animator.

Video Game Design
Bachelor of Science Degree

Quarter VII

Course	No.	Course Title	C	L	T
GDS	375	Simulation and Serious Games	2	2	3
VGD	371	Advanced 3D Modeling	2	4	4
VGD	372	UI/UX Design Principles	2	2	3
EN	331	Research Writing (COM Core)	4	0	4
			10	8	14

Quarter VIII

Course	No.	Course Title	C	L	T
GDS	370	Advanced Game Design	2	2	3
VGD	380	3D Digital Sculpting	2	4	4
VGD	384	Game Engines	2	4	4
ELECTIVE		Math/Science Core	4	0	4
			10	10	15

Quarter IX

Course	No.	Course Title	C	L	T
VGD	390	Advanced Animation I	2	4	4
VGD	392	3D Scripting & Advanced Rigging	2	4	4
VGD	394	Game Analytics	2	2	3
MA	300	Statistics	4	0	4
ELECTIVE		Humanities Core	4	0	4
			14	10	19

Quarter X

Course	No.	Course Title	C	L	T
GDS	402	Level Design and Gameplay Development	2	2	3
VGD	404	Advanced Texturing	2	4	4
VGD	408	Virtual Production/Motion Capture	2	2	3
EN	421	Technical Communications (COM Core)	4	0	4
			10	8	14

Quarter XI

Course	No.	Course Title	C	L	T
GDS	410	Introduction to Senior Project	2	6	5
VGD	412	Game Industry Perspectives	2	2	3
GDS	413	Advanced Portfolio Development	1	0	1
ELECTIVE		Humanities, Social Sciences, or Arts/Foreign Language Core	4	0	4
			9	8	13

OR Quarter XI

Course	No.	Course Title	C	L	T
GDS	410	Introduction to Senior Project	2	6	5
IT	415	Cooperative Learning I	0	18	6
ELECTIVE		Humanities, Social Sciences, or Arts/Foreign Language Core	4	0	4
			6	24	15

Quarter XII

Course	No.	Course Title	C	L	T
GDS	420	Senior Project	2	8	6
GDS	422	Emerging Technologies in Game Development	2	4	4
ELECTIVE		Social Sciences Core	4	0	4
			8	12	14

Or Quarter XII

Course	No.	Course Title	C	L	T
GDS	420	Senior Project	2	8	6
IT	425	Cooperative Learning II	0	21	7
ELECTIVE		Social Sciences Core	4	0	4
			6	29	17

Total Quarter Credit Hours = 89/94

Legend

C = Number of lecture hours per week
L = Number of laboratory hours per week
T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one credit depending on the expected amount of pre- or post-lab work.

PLEASE NOTE: All liberal arts core courses are listed in italics.

All bachelor degree students are required to take 28 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses.

Associate in Science Degree

The Video Game Development and Design program has two degree tracks: Game Development and Simulation Programming and Video Game Design.

GAME DEVELOPMENT AND SIMULATION PROGRAMMING

The associate degree program in Game Development and Simulation Programming will prepare students for entry-level careers in game programming, simulation programming, and software engineering as well as for entry-level positions in a variety of digital, desktop production environments.

Through a combination of theoretical and hands-on state-of-the-art laboratory experiences, small class sizes led by experienced instructors, the program emphasizes application of knowledge to the design and development of games and simulations in order to prepare students for the exciting field of game development as well as for the simulation industry.

Students will learn how to design games, will be introduced to the game development process, will hone people skills and communications skills through team-based projects and presentations, will master coding languages such as C++, and will learn the use of industry-standard software packages. An important component of the curriculum is building a portfolio that will include the 2D games developed by students. Graduates from this program will be eligible for entry-level positions such as junior game designer, quality assurance engineer, and junior programmer. This program also prepares students to further their education in NEIT's bachelor's degree program in Game Development and Simulation Programming.

VIDEO GAME DESIGN

The associate degree program in Video Game Design will prepare students for entry-level careers in game design, animation and visualization as well as for entry-level positions in a variety of digital media production environments.

Through a combination of theoretical and hands-on state-of-the-art laboratory experiences, small class sizes led by experienced instructors, the program emphasizes application of knowledge to the design and development of games and simulations in order to prepare students for the exciting fields of the electronic entertainment and simulation industries.

Students will learn how to design games, will be introduced to the game development process, will hone people skills and communications skills through team-based projects and presentations, will master 2D and 3D animation concepts, and will learn the use of industry-standard software packages. An important component of the curriculum is building a portfolio that will include game assets developed by students. Graduates from this program will be eligible for entry-level positions such as junior game designer, technical artist, level designer, and visual effects animator. This program, after completing certain prerequisites, also prepares students to further their education in NEIT's bachelor's degree program in Game Development and Simulation Programming.

CORE CURRICULUM

Quarter I

Course	No.	Course Title	C	L	T
GDS	111	XHTML/Javascript	2	4	4
GDS	114	Introduction to Game Development	2	2	3
GDS	115	Digital Graphics for Gaming	2	2	3
		CHOOSE ONE *(depending upon Math placement)*			
MA	*100/110*	*Introduction to College Math (MA/SCI Core)*	*4*	*0*	*4*
-or-					
ELECTIVE		*Math/Science Core*			
			10	8	14

Quarter II

Course	No.	Course Title	C	L	T
GDS	110	Introduction to Game Programming	2	4	4
GDS	125	2D Assets and Animation	2	4	4
GDS	128	Visual Communications for Game Designers	2	2	3
		CHOOSE ONE *(depending upon English placement)*			
EN	*101*	*Introduction to Writing and Workplace Communication (COM Core)*	*4*	*0*	*4*
-or-					
EN	*102*	*Critical Thinking and College Writing (COM Core)*			
			10	10	15

Quarter III

Course	No.	Course Title	C	L	T
GDS	121	Intermediate Game Programming	2	4	4
GDS	137	Game Prototyping	2	4	4
VGD	133	3D Modeling I	2	4	4
ELECTIVE		*Social Sciences Core*	*4*	*0*	*4*
		CHOOSE ONE *(depending upon English placement)*			
EN	*102*	*Critical Thinking and College Writing (COM Core)*	*4*	*0*	*4*
-or-					
ELECTIVE		*Communications Core*			
			14	12	20

Video Game Development and Design
Associate in Science Degree

GAME DEVELOPMENT AND SIMULATION PROGRAMMING CURRICULUM

Quarter IV

Course	No.	Course Title	C	L	T
GDS	131	Advanced Game Programming	2	4	4
GDS	243	MOD	2	2	3
VGD	244	Unity I	2	4	4
MA	125	*Technical Math I*	4	0	4
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	4	0	4
			14	10	19

Quarter V

Course	No.	Course Title	C	L	T
GDS	241	API Programming	2	4	4
GDS	252	Algorithms and Data Structures	2	4	4
VGD	255	Unity II	2	2	3
PHY	200	*Physics I & Lab (MA/SCI Core)*	4	0	4
			10	10	15

Quarter VI

Course	No.	Course Title	C	L	T
GDS	134	Game Persistence	2	2	3
GDS	261	Game Architecture	2	2	3
GDS	267	Portfolio Development	0	2	1
GDS	268	Game Studio	0	6	3
MA	210	*Technical Math II*	4	0	4
			8	12	14

Total Quarter Credit Hours = 97

VIDEO GAME DESIGN CURRICULUM

Quarter IV

Course	No.	Course Title	C	L	T
GDS	243	MOD	2	2	3
VGD	242	3D Modeling II	2	4	4
VGD	244	Unity I	2	4	4
MA	200	*Applied Math for Business*	4	0	4
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	4	0	4
			14	10	19

Quarter V

Course	No.	Course Title	C	L	T
VGD	253	3D Modeling III	2	4	4
VGD	255	Unity II	2	2	3
VGD	259	Storyboard and Design	2	2	3
ELECTIVE		*Social Sciences Core*	4	0	4
			10	8	14

Quarter VI

Course	No.	Course Title	C	L	T
GDS	267	Portfolio Development	0	2	1
VGD	257	Animation I	2	2	3
VGD	263	Digital Audio and Video Editing	2	4	4
GDS	268	Game Studio	0	6	3
ELECTIVE		*Humanities (or Arts/Foreign Language) Core*	4	0	4
			8	14	15

Total Quarter Credit Hours = 97

Legend

C = Number of lecture hours per week
L = Number of laboratory hours per week
T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one credit depending on the expected amount of pre- or post-lab work.

PLEASE NOTE: All liberal arts core courses are listed in italics.

All associate degree students are required to take 32 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses. Students who place out of EN 101, EN 102 or MA 100/110 must still take 32 credits of core courses.

LIBERAL ARTS CORE ELECTIVES

All programs must meet certain minimum requirements in both the major and in the liberal arts. Course requirements for each program are listed in each curriculum along with liberal arts selections. Courses listed as "Core Electives" in a curriculum can be chosen by students from one of the several core areas listed below. Each core area provides a variety of courses for student choice. Students must take a minimum of 32 credits in core electives for the associate degree and an additional minimum of 28 credits for the bachelor's degree. Individual majors have specific requirements and may require more than the minimum number of liberal arts credits or may specify certain courses in a particular core area. All liberal arts core elective courses are 4 credits. Please refer to the curriculum of the major for specific requirements.

Associate Degree Course Core Elective Areas[1]

To obtain a minimum of 8 courses (32 credits), students may choose from the following course selections:
2 courses (minimum) from the Communications Core
2 courses (minimum) from the Math/Science Core
1-2 courses from the Humanities Core OR
    1 course from the Humanities Core AND/OR
    1 course from the Arts/Foreign Language Core
1-2 courses from the Social Sciences Core

Associate Degree Courses by Core[1]

Communications Core Electives (Minimum 8 Credits)
EN 101   Introduction to Writing and Workplace Communication (required of all students)
EN 102   Critical Thinking and College Writing (required of all students)
EN 110 Healthcare Communication Skills (Nursing only)
EN 211 Oral Communications
HU 208 Rap/Rock and Poetry

Math/Science Core Electives (Minimum 8 Credits)
CHM 101 Life Science Chemistry
MA 100/110 Introduction to College Math
MA 109   Math for Life Science
MA 121   Business Math
MA 125   Technical Math I
MA 200   Applied Math for Business
MA 210   Technical Math II
PHY 126   Applied Physics & Lab
PHY 200   Physics I and Lab
SCI 109   Logic and Reasoning
SCI 110   Environmental Science
SCI 114   Introduction to Meteorology

Arts/Foreign Language Core Electives (Maximum of 4 Credits in Place of a Humanities Course)
AR 203   Introduction to Drawing
AR 204   Introduction to Theater
AR 205   Introduction to Digital Photography
AR 206   3D Sculpture: an Adventure in the Third Dimension
AR 207   Introduction to Applied Music
AR 209   The Art of Collage
JP 201   Introduction to Japanese
SP 201   Introduction to Spanish
SP 203   Spanish for Healthcare Workers

Humanities Core Electives (Minimum 4 Credits)
HU 207 Introduction to Literature
HU 208 Rap/Rock and Poetry
HU 211 Introduction to Film
HU 212 Documentary Film
HU 215   Popular Culture
HU 216   Music and the Media
HU 240   Graphic Design in the 20th Century
HU 242   The Automobile and American Culture
HU 243   The American Dream (literature course)
HU 244   Science Fiction
HU 250   Cribs: The American Home
HU 291   Critical Thinking and Chess

Social Sciences Core Electives (Minimum 4 Credits)
PS 210   Human Relations in the Workplace
SO 203   Social Problems
SO 220   Internet and Society
SO 231   Crime and Deviance
SS 140   Criminal Investigations
SS 201   American Government in Action
SS 203   Terrorism & National Security
SS 204   Juvenile Justice System in America
SS 206   Constitutional Values in the 21st Century
SS 221   Technology and American Life

1. Subject to Change

Liberal Arts Core Electives (BS)
Please refer to the curriculum for each program for specific requirements as some curricula require more than the minimum number of liberal arts core courses. Only the associate-level core electives in the list below can be used to satisfy bachelor degree core requirements.

Bachelor's Degree Course Core Elective Areas[1]

To obtain a minimum of 7 courses (28 credits), students may choose from the following course selections:
2 courses from the Communications Core
2 courses from the Math/Science Core
1 course from the Humanities Core
1 course from the Social Sciences Core
1 course from either the Humanities Core
    OR from the Arts/Foreign Language Core
    OR from the Social Sciences Core

Bachelor's Degree Courses by Core[1]

Communications Core Electives (Minimum 8 Credits)
EN 331   Research Writing
EN 421   Technical Communications
EN 422   Writing in the Health Sciences
SS 303   Communication in the Global Workplace

Math/Science Core Electives (Minimum 8 Credits)
CHM 300 Chemistry I and Lab
MA 300   Statistics
MA 310   Calculus I
MA 315   Math for Game Developers
MA 320   Calculus II
PHY 300 Physics II & Lab
SCI 304   Development of Western Science
SCI 307   Understanding Science Through Photography
SCI 320   Understanding Flight
SCI 330   Our History and Future in Space
SCI 340   Introduction to Environmental Health
SCI 350   Introduction to Genetics and Evolution

Arts/Foreign Language Core Electives (Maximum of 4 Credits in Place of a Humanities Course)

JP 201	Introduction to Japanese
SP 201	Introduction to Spanish
SP 203	Spanish for Healthcare Workers

Humanities Core Electives (Minimum 4 Credits)

HI 311	The History of the American Family
HU 311	The Art of Film
HU 313	World War II in Film
HU 321	Representations of Gender
HU 331	Ethics and Technology
HU 341	World Religions
HU 350	Literature and Health
HU 352	History of Rock and Roll
HU 432	History of Western Art
HU 433	Encountering 20th Century Art
HU 441	World Literature

Social Sciences Core Electives (Minimum 4 Credits)

EC 301	The Global Economy
EC 321	Healthcare Economics Dilemmas
PS 330	Marriage and the Family
PS 410	Applied Research Statistics
SO 321	Sociology of Aging
SO 333	Sport in Society
SO 461	Language and Society
SS 302	The United States Legal System
SS 303	Communication in the Global Workplace
SS 304	Digital Media & the Law
SS 330	Contemporary Social Issues
SS 350	Everything is a Negotiation

1. Subject to Change

Course Codes

ABT – Architectural Building Engineering
AH – Refrigeration/Air Conditioning/Heating
AR – The Arts
AS – Academic Skills
ATX – Automotive *(see also TT)*
AUB – Automotive Collision Repair
    (see also AUT & TT)
AUT – Automotive *(see also TT)*
BIO – Biology
BU – Business
CE – Community Enrichment
CET – Civil Engineering Technology
CHM – Chemistry
CJ – Criminal Justice
CMA – Clinical Medical Assistant
    (see also HS & BIO)
CMT – Construction Management
    (see also ABT & MGM)
CR – Building Construction/Cabinetmaking
CYB – Cyber Security
DPM – Digital Media Production
EC – Economics
ELT – Electrical Technology/Electrical
    Engineering Technology
EN – English
EST – Electronic Systems Engineering
    Technology
GDS – Game Development and Simulation
    Programming *(see also GMW & SE)*
GMW – Graphics, Multimedia & Web Design
HIM – Electronic Medical Records (Health
    Information Management)
    (see also HS & BIO)
HI – History
HS – Health Sciences
HU – Humanities
ID – Interior Design *(see also ABT)*

IT – Information Technology
    (see also NE & SE)
JP – Japanese
MA – Mathematics
MCT – Mechanical Engineering Technology
MGM – Business Management
MLT – Medical Laboratory Technology
MSCM – Construction Management (MS-level)
MT – Marine *(see also TT)*
NE – Network Engineering *(see also IT & SE)*
NUR – Nursing
OT – Occupational Therapy
OTA – Occupational Therapy Assistant
    (see also BIO)
PHY – Physics
PL – Plumbing *(see also AH)*
PS – Psychology
PTA – Physical Therapist Assistant
    (see also BIO)
RC – Respiratory Care *(see also BIO)*
SCI – Science
SE – Software Engineering *(see also IT & NE)*
SO – Sociology
SP – Spanish
SS – Social Sciences
ST – Surgical Technology
    (see also HS, BIO, & IT)
TT – Transportation Technology
    (see also AUB, AUT, & MT)
VET – Veterinary Technology *(see also BIO)*
VGD – Video Game Design
    (see also GDS, GMW, & SE)
VPM – Veterinary Practice Management

ARCHITECTURAL BUILDING ENGINEERING

ABT 110 Introduction to Architecture and Building Technology

1 Class Hour 1 Quarter Credit Hour

This course introduces students to the field of architectural/building technology as a profession and the many career paths available to graduates. Topics will include skills, attitudes, ethics, and license requirements necessary to the profession; relationships with other trades and professions; and program options within the college.

ABT 111 Introduction to Building Science

1 Class Hour 1 Quarter Credit Hour

This is a survey course which introduces students to Building Science. Primary topics will include the many professional disciplines and career paths available to graduates. Additional topics will also include the skills and attitudes necessary to the disciplines, professional ethics, relationships with other trades and professions, construction documentation, and LEED.

ABT 112 Technical Drafting and Graphic Communications

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours

This course is designed to give students the basic understanding of Technical Drafting and Graphic Communications through the exploration and use of drafting materials and methods using both two- and three-dimensional exercises. The emphasis will be on wood frame construction. Architectural lettering, line work, and standard abbreviations will be covered, as well as the proper use of architectural and civil engineering scales. Basic concepts are introduced including ordering principles, proportion, human scale and the basic elements of architecture and interior design. Students develop their own powers of observation throughout the course as they gain new levels of awareness, understanding, and ability related to design.

ABT 114 Introduction to Computer-Aided Drafting (CAD)

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours

This course will provide students with the basics in architectural drafting using the applications of computer-aided design. Students will become familiar with keyboard and mouse functions as they apply to architectural drawings. The emphasis will be on wood frame construction. Topics will include use of the CAD system, the role of drawings in the construction process, and the relationship between the drawings.

ABT 115 Introduction to Structures

2 Class Hours 2 Quarter Credit Hours

This course is a study of basic concepts and terminology used in the design of a building's structural system. The emphasis will be on residential and light commercial construction. Topics covered will include types of loads, load and area calculations, materials, theory of equilibrium, elementary statics, structural components, stair design, foundation design, roof pitches, and the use of span charts found in the Rhode Island State Building Code.

ABT 122 Two- & Three-Dimensional Design Theory

3 Class Hours 3 Quarter Credit Hours
Prerequisite: ABT 112

In this course, students will explore and develop an understanding of abstraction and conceptualization of two- and three-dimensional design relevant to architecture and interiors. Through a series of assigned studio exercises, students will study ordering principles, color theory, and basic elements and organization of space and form.

ABT 124 Construction Methods & Materials

3 Class Hours 3 Quarter Credit Hours

This course is an introduction to building science relative to the assembly of systems, both structural and non-structural, and to the extensive technical terminology used in the building industry. The main focus of the course will be on commercial construction. Topics will include explanations of major building systems and their assembly, the identification of their components, and the limitations of the systems.

ABT 125 Building Design & Technology I

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisites: ABT 112, ABT 114, ABT 115

This course will introduce students to the design process and provide additional knowledge about the preparation of residential design development and construction drawings. Based upon a supplied program and site plan, students will design and execute documents for a single-family residence. Standard techniques of wood frame construction will also be discussed. Topics covered will include design theory, site planning, sequencing of drawings, wood frame terminology, components and their proper assembly, and the content of typical drawings necessary for the construction of a wood framed residence. Also included is an explanation of relevant sections of the building code, the importance of their proper use, and their relationship to wood frame construction.

ABT 127 Introduction to Construction Estimating

3 Class Hours 3 Quarter Credit Hours
Prerequisites: ABT 112, ABT 115, MA 100/110

In this course, students study the estimating procedures and principles used to determine detailed cost estimates in the construction bidding process. The emphasis will be on residential and light commercial construction. Topics covered will include the organization, classification, and quantity surveys of materials and labor costs, subcontracted work, overhead and profit.

ABT 135 Building Design & Technology II

2 Class Hours 8 Lab Hours 6 Quarter Credit Hours
Prerequisites: ABT 124, ABT 125

This course will introduce students to commercial design, the integration of the design to building systems, and the documentation necessary to construct them. Based upon a supplied program and predetermined column configuration, students will design and develop drawings and construction documents for a low rise, steel-framed commercial building. Topics will include design theory, enclosure systems, structural systems and their components, circulation, vertical transportation systems, building code requirements and ADA requirements, and the sequencing of and relationships between the documents.

ABT 137 Introduction to Environmental Systems

3 Class Hours 3 Quarter Credit Hours
Prerequisite: ABT 124

An introduction and qualitative study of typical plumbing, heating, air conditioning, lighting, and electrical systems in buildings. The emphasis will be on light commercial construction.

ABT 138 Surveying & Civil Technology

1 Class Hour 2 Lab Hours 2 Quarter Credit Hours
Prerequisites: ABT 125 or CR 122, and MA 125

This course introduces and familiarizes students with the science of surveying, applications, equipment, and methods. Topics covered include equipment operation and handling, terminology, leveling, horizontal and vertical measurements, angles, and construction layout. Lab work is supplemented with data plotting and related computations using hand and computer solutions.

ABT 211 Presentation Techniques

1 Class Hour 2 Lab Hours 2 Quarter Credit Hours
Prerequisite: ABT 112

This course is an introduction to manual three-dimensional drawing as a means of graphic communications. Through lectures and sketch assignments, students will learn one- and

two-point perspectives, color theory, the use of texture, and shades and shadows, as they pertain to presentation techniques.

ABT 218 Building Information Modeling I (BIM I)

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisites: (ABT 114 and ABT 135) or (ID 121 and ID 132) or (CET 114 and CET 225)

This course introduces computer-aided parametric building information modeling as a tool used in the design of buildings and as a means of producing architectural documentation. The primary software product used in this course will be Revit by Autodesk. Topics will include design visualization, bi-directional associativity, interoperability, detailing, intuitive user interface, and parametric components.

ABT 221 Visualization Studies I

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: ABT 218

This course will cover the primary conceptual and operational aspects of architectural and engineering visualization. Using 3ds Max® Design, the course will explore the program interface and primary command structure. Subjects covered will include geometry, modifiers, materials, linking Revit files, mapping, basic lighting, and rendering.

ABT 225 Building Design & Technology III

4 Class Hours 6 Lab Hours 7 Quarter Credit Hours
Prerequisites: ABT 135, ABT 137, ABT 211

Students will continue to explore the architectural design process by investigating an existing building, assessing the design and developing an understanding of the subjects spatial, environmental, structural, mechanical and architectural components. Student understanding of this structure will be demonstrated through drawings and models. The analysis will be followed by a building design problem assigned by the instructor. Students will demonstrate their designs and define how the development was informed by the existing building investigations. Topics covered will include drawing, model making, and theory of design, concept formulation and schematic design. Students will make a graphic presentation representing their solution to a jury of critics at the end of the quarter.

ABT 235 Building Design & Technology IV

4 Class Hours 6 Lab Hours 7 Quarter Credit Hours
Prerequisite: ABT 225

Students will continue to explore the architectural design process by solving a building design problem assigned by the instructor. The project will begin with programmatic information and a raw site and culminate in the design development phase. Topics covered will include theory of design, programming, concept formulation, selection of structural and mechanical systems, and schematic design and design development drawings. The effects of site, environment, precedent and zoning regulation on the design process will be discussed. Students will make a graphic presentation representing their solution to a jury of critics at the end of the quarter.

ABT 236 Building Codes

2 Class Hours 2 Quarter Credit Hours
Prerequisites: ABT 135 or ID 121 and ID 132

In this course, students study the codes that regulate the building industry. Topics will include code history, their purpose, and how they are organized. Also included will be a review of the International Building Codes, Mechanical Codes, National Fire Protection Code, and the Americans with Disabilities Act as it pertains to the accessibility of buildings.

ABT 314 Construction Contracts & Specifications

3 Class Hours 3 Quarter Credit Hours
Prerequisites: MCT 224 or ID 315

This course is a study of the procedures used to prepare construction specifications and standard construction contracts. Emphasis will be on commercial construction projects. Topics covered will include the CSI specification format, abbreviated and three-part specifications, party responsibility, liability, and the relationship between contracts and specifications, and contract type versus delivery method.

ABT 315 Structural Wood Design

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: MCT 224

In this course, students study the analysis and design of wood relative to its use as a structural system. Topics will include wood properties, grading rules, allowable working stresses, deflection, connections, flitch beams, framing systems, and loading conditions. Structural differences between solid sawn, laminated, and engineered lumber will be examined as well as the use of computer programs as a design tool.

ABT 324 Masonry Construction & Detailing

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: ABT 235

In this course, students study the technical and mechanical properties of masonry construction relative to its use as a structural and enclosure system. Topics will include shapes and types of masonry block, bond beams, lintels, piers, masonry foundations, typical construction details, brick and stone veneers, integration with other structural systems, and code regulations.

ABT 325 Soil Mechanics & Foundation Design

3 Class Hours 3 Quarter Credit Hours
Prerequisite: MCT 224

In this course, students study the engineering properties of soils and the principles of foundation design. Topics covered will include soil classification, stress, settlement, consolidation, slope stability, bearing pressure, and retaining wall and shallow foundation design.

ABT 328 Structural Steel Design

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: MCT 224

In this course, students study the analysis and design of steel relative to its use as a structural system. Topics will include properties of steel, the design of beams, columns, plates and joists, riveted and welded connections, code compliance, and the use of computer programs as design tools.

ABT 330 Visualization Studies II

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisites: ABT 221, ABT 337

This course will cover advanced aspects of architectural and engineering visualization through the use of 3ds Max® Design, Adobe Premiere and the college's rapid prototyping facilities. The course will explore photorealistic rendering, animation, basic film editing techniques and rapid prototyping. Topics will include multiple file scenes, compartments, lofting, Boolean operations, advanced lighting, advanced materials, animation, basic film editing and rapid prototyping operations.

ABT 331 Advanced Environmental Systems

3 Class Hours 3 Quarter Credit Hours
Prerequisites: ABT 137, ABT 236

This course expands upon the theory, applications, and technology studied in ABT 137 Introduction to Environmental Systems. Topics will include heating and cooling, electrical, and plumbing systems used in high rise and commercial building types. Additional topics will include fire suppression systems, related code issues, and sustainable options.

ABT 334 Site Engineering & Planning

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: MCT 224

A study of the concepts and technology used in the design, planning, and engineering of a site relative to land use and real estate development. The emphasis will be on residential single and multi-family development. Topics will include site analysis and selection, plane surveying, grading, roads, drainage, utilities, density, erosion and sediment control, zoning and environmental regulations, and federal, state and municipal approvals. Students will develop a graphic solution for an assigned real estate development project.

ABT 337 Building Information Modeling II (BIM II)

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: ABT 218

This course expands upon the theory and applications of computer-aided drafting and building information modeling studied in ABT 218. The emphasis will be on advanced use of Revit by Autodesk and increased productivity techniques.

ABT 338 Reinforced Concrete Design

4 Class Hours 4 Quarter Credit Hours
Prerequisite: MCT 224

In this course, students study the analysis and design of reinforced concrete elements relative to their use as a structural system. Topics will include properties of reinforced concrete, the design of beams, columns, and one way slabs, positive and negative moment and shear reinforcement, pre-stressed concrete, code compliance, and the use of computer programs as design tools.

ABT 410 Building Design & Technology V (Low Rise)

4 Class Hours 6 Lab Hours 7 Quarter Credit Hours
Prerequisites: ABT 236, ABT 314, ABT 315, ABT 324, ABT 325, ABT 328, ABT 331, ABT 334

In this course, students will explore the relationship between architectural design and the engineering and technology necessary to bring those designs to fruition. The emphasis will be on low rise buildings. Each student will develop a design solution for an assigned problem including the analysis and integration of the building, structural, and environmental systems. Students will make a graphic presentation representing their solution to a jury of critics at the end of the term.

ABT 412 Sustainability in Construction

3 Class Hours 3 Quarter Credit Hours

In this course, students will study the concepts and applications of sustainability in construction. Topics will include sustainable requirements, sustainable practices in the design and construction of buildings, life cycle analysis, environmental regulations, sustainable global initiatives, and criteria for LEED.

ABT 414 Current Topics I

3 Class Hours 3 Quarter Credit Hours
Prerequisites: ABT 315, ABT 328, ABT 338

This class is a survey course on current topics relative to the architecture, engineering, and the construction industry. Specific topics may include real estate development and financing, construction financing, visualization techniques, green technology and sustainability, structures and construction risk analysis.

ABT 420 Building Design & Technology VI (High Rise)

4 Class Hours 6 Lab Hours 7 Quarter Credit Hours
Prerequisites: ABT 236, ABT 314, ABT 315, ABT 324, ABT 325, ABT 328, ABT 331, ABT 334

In this course, students will further explore the relationship between architectural design, engineering, and technology relative to high rise buildings. Each student will develop a design solution for an assigned problem including the analysis and integration of the building, structural, and environmental systems. Students will make a graphic presentation representing their solution to a jury of critics at the end of the term.

ABT 421 Acoustics & Lighting

3 Class Hours 3 Quarter Credit Hours
Prerequisites: ABT 235, MA 210, PHY 300 (ABT students) OR ID 121, MA 125 (ID students)

In this course, students study the basic concepts, terminology, and technical understanding of acoustics and illumination relative to building and site design, construction, and human comfort. Topics will include noise transmission and control, acoustical properties of materials, STC ratings of assemblies, natural and artificial illumination, lighting calculations, selections of fixtures and systems, and code regulation.

ABT 423 Senior Thesis Proposal

1 Class Hour 1 Quarter Credit Hour

This course is a direct preparatory course for ABT 430/CMT 435/ID 430 Senior Thesis. The intent of the course is to guide and assist students through the process of initial project selection, site selection, and proposal preparation. Topics will include site analysis, research, and architectural programming.

ABT 424 Current Topics II

3 Class Hours 3 Quarter Credit Hours

This class is a survey course on current topics relative to the architecture, engineering, and construction industries. Specific topics may include real estate development and financing, construction financing, visualization techniques, green technology and sustainability, construction risk analysis. Topics will change from quarter to quarter.

ABT 430 Senior Thesis

2 Class Hours 6 Lab Hours 5 Quarter Credit Hours
Prerequisites: ABT 410, ABT 420, ABT 421, ABT 423

This is a direct-studies course in which students must demonstrate to the architectural and construction faculty their understanding of and ability to utilize and synthesize the design, technical and engineering concepts they have developed throughout their college experience. Prior to the commencement of the quarter, students will submit, in proposal format, a project for review and approval by the faculty. Students will work independently with weekly interaction with a faculty advisor. The quarter will culminate with a formal presentation to a jury of faculty and critics.

ABT 433 Construction Law

3 Class Hours 3 Quarter Credit Hours
Prerequisite: ABT 314 or ID 232

This course examines the aspects of law which are unique or of special interest to the construction and architectural process. Topics will include government regulations, bidding, contracts, formation and interpretation of contract documents, liability, risk management, and dispute resolution.

REFRIGERATION/AIR CONDITIONING/HEATING

AH 110 Basic Refrigeration

7 Class Hours 7 Quarter Credit Hours

This course involves the study of heat and the way in which refrigeration technology is employed to transfer this source of energy. It also includes the study of tools and devices utilized to efficiently move this energy from one point to another, applications of the evaporation and condensation cycle of common refrigerants, and the analysis of the design, operation, and servicing of the mechanical refrigeration system.

AH 112 Basic Refrigeration Lab

2 Class Hours 4 Lab Hours 3 Quarter Credit Hours

Areas of practice in this course include fabrication of refrigerant lines and connections that join the various refrigeration components together; the service technique as applied to installing manifold gauge sets and temperature-measuring devices; removing, adding or replacing refrigerant charges; and proving operational conditions on live educational and factory-designed equipment.

AH 120 Basic Refrigeration Electricity

7 Class Hours 7 Quarter Credit Hours
Prerequisites: AH 110/112, AH 123

This course involves the study of basic electricity and of electricity as it applies to refrigeration and air conditioning systems. Semi-conductors which serve as a foundation for more advanced solid-state control systems; procedures required in the use of diverse electrical instruments and how they can be employed to diagnose electrical problems; compressor drive and fan motor circuitry and hermetic circuits with their associated starting relays; and motor starting capacitor circuitry are discussed.

AH 123 Basic Electricity

2 Class Hours 3 Lab Hours 3 Quarter Credit Hours

This basic course is intended to familiarize heating, refrigeration/air conditioning, and plumbing students with the knowledge of electricity necessary to be successful in their respective fields. Specific topics include: basic atomic theory; current, voltage, and resistance; circuitry; electromagnetic devices; and residential panel designs and circuit installations. Laboratory experiments utilizing power supplies, electrical devices, and analog and digital meters, are designed to reinforce understanding of these topics.

AH 124 Basic Refrigeration Electricity Lab

2 Class Hours 4 Lab Hours 3 Quarter Credit Hours
Prerequisites: AH 110/112, AH 123

Students work on projects concerned with the use of voltmeters, ammeters, ohmmeters, wattmeters, and capacitor bridges. Other projects include: proving the effects of voltage drop, high resistance contacts, shorts and opens, and related preventive maintenance. Students practice wiring and operation of open and hermetic motors with a variety of control systems, as well as troubleshooting all of the common failures which can put refrigeration plants in jeopardy of improper and costly operation.

AH 130 Commercial Refrigeration

7 Class Hours 7 Quarter Credit Hours
Prerequisites: AH 120/124

Topics of study include: advanced refrigeration principles involving humidity control as well as temperature; selection of the low and high sides of a refrigeration system with stress being placed on the balancing of their capacities for peak efficiency; specialized study of the design of walk-in coolers and freezers; and installation of both self-contained and remote condensing equipment.

AH 132 Commercial Refrigeration Lab

2 Class Hours 4 Lab Hours 3 Quarter Credit Hours
Prerequisites: AH 120/124

Students work on controlling temperature and humidity on actual commercial fixtures, setting the various types of electrical and pressure/temperature controls widely used to operate commercial systems, sizing and installing liquid and suction lines on walk-in freezers and coolers. Diagramming and installing wiring of contactors, starters and associated electrical equipment will also be covered.

AH 210 Air Conditioning

7 Class Hours 7 Quarter Credit Hours
Prerequisites: AH 130/132

Topics studied include: air and its properties; psychrometric functions of air conditioning systems and an analysis of equipment installation and diagnostic procedures; the fundamentals of liquid chillers, cooling towers and water-cooled condensers with concentration directed to components, controls, and overall operation; and heat load calculations and selection of equipment to be installed.

AH 212 Refrigeration Technician Certification

2 Class Hours 2 Credit Hours
Prerequisites: AH 110, AH 120

This course is intended to familiarize students with the federal laws and regulations involving the use and handling of refrigerants. Students study the effects of CFC and HCFC use on the environment past and present, the Montreal Protocol's reaction to global environmental problems such as ozone depletion and global warming, and the proper use of equipment that complies with The Clean Air Act of 1990.

AH 213 Air Conditioning Lab

2 Class Hours 4 Lab Hours 3 Quarter Credit Hours
Prerequisites: AH 130/132

Students apply the principles of psychrometry in testing an operating air conditioner; study the various components that make up the system, tracing the many refrigerant and electrical circuits used in domestic and commercial systems; and use air measuring instruments to determine the actual volume and weight of air being circulated.

AH 220 Basic Heating

9 Class Hours 9 Quarter Credit Hours
Prerequisite: AH 123

Various oil burner designs will be studied. Each major oil burner component will be examined as to its function, operation, testing, and replacement. Pipe-fitting practices will be explained and demonstrated. Chimneys and alternate venting methods will be presented. Draft, combustion chambers, boiler construction, combustion testing and schematic reading are all covered in detail in this course. Students will also receive information on operation, location, testing, and replacement of the most common types of thermostats and primary controls.

AH 222 Basic Heating Lab

8 Lab Hours 2 Quarter Credit Hours
Prerequisite: AH 123

This course provides experience in servicing, repairing, testing, analyzing, installing, and replacing oil burner components through laboratory projects. It also includes wiring and servicing of burner controls, fabricating soldered joints, and pipe fitting.

AH 226 Gas Technology

9 Class Hours 9 Quarter Credit Hours
Prerequisites: AH 230/232

Gas Technology is designed to give students a practical working knowledge of gas-fired equipment and the associated practices and procedures for the installation, troubleshooting, and servicing of this type of equipment. The objectives for the course are accomplished through the study of gas properties, combustion theory, distribution systems and regulators, various burner designs, control systems, and venting requirements.

AH 228 Gas Technology Lab

8 Lab Hours 2 Quarter Credit Hours
Prerequisites: AH 230/232

Students are able to apply the theory learned in class to live units in the lab. The lab experience affords students valuable hands-on application in areas such as testing, troubleshooting, and servicing on the same type of equipment that will be encountered in the field.

AH 230 Heating Systems Theory

9 Class Hours 9 Quarter Credit Hours
Prerequisites: AH 123, AH 220/222

Students study the design, construction, and operation of gravity and forced warm air systems, domestic water heaters as well as steam systems and accessories. The course also covers the understanding of forced hot water system components and controls. Heat loss calculation and design of a forced hot water system are also presented.

AH 232 Heating Systems Lab

8 Lab Hours 2 Quarter Credit Hours
Prerequisites: AH 123, AH 220/222

Students service steam, hot water, and warm air heating systems in the laboratory. Accessories and energy-conservation devices are installed as part of students' lab work. Troubleshooting procedures are analyzed on the burners. Complete combustion testing is done in one of the approximately forty units. Students make recommendations to improve the operation of these units.

THE ARTS (ARTS/FOREIGN LANGUAGE CORE)

AR 203 Introduction to Drawing

4 Class Hours 4 Quarter Credit Hours

This course introduces students to key concepts and techniques integral to developing basic drawing skills. Class time will be spent discussing, demonstrating and practicing these skills in order to produce a comprehensive body of work specific to the course objectives. Course performance will be evaluated on effort and growth as opposed to artistic talent.

AR 204 Introduction to Theater

4 Class Hours 4 Quarter Credit Hours

This course will provide students with both a theoretical and practical understanding of acting and the theatrical process as evidenced by theatrical scenes, performed by students as a final project. Theater exercises will guide students toward self-discovery in order to explore character development and the interpretation of the content/themes of various plays. Students will write character analysis essays as a method for understanding the specific elements of acting necessary to accurately portray a given character. Students will also explore the ways in which a play is translated into a production with an emphasis on differentiating the functions of the playwright, the actor, the director, set designer and other members of a production team.

AR 205 Introduction to Digital Photography

4 Class Hours 4 Quarter Credit Hours
**Not available to GMW students.

This course introduces students to the basic concepts of digital image making. Students will also develop skills in the critical analysis of photographs and learn about both the creative process and the historical significance of photography. Course performance will be evaluated on student effort and growth as opposed to artistic talent.

AR 206 3D Sculpture: An Adventure in the Third Dimension

4 Class Hours 4 Quarter Credit Hours

This course will teach students to think, see and function in 3-dimensional space. They will explore the differences and similarities between 2-dimensional and 3-dimensional representation in composition and design. Students will use a broad range of materials to create sculptures that will help them explore different aspects of 3-dimensional functioning. Class time will be spent in a combination of sculpture design and a discussion of slides of work reflecting the history of three-dimensional works of art from Greek times to the present. No prior experience with art courses is required.

AR 207 Introduction to Applied Music

4 Class Hours 4 Quarter Credit Hours

This course will afford students the opportunity to experience a "hands-on" approach to piano keyboard and composition. Each section of the course will focus on one musical concept through listening, playing and finally application. Because of the computer-assisted nature of the program, all levels of musical and keyboard comprehension can be accommodated and the course can be geared to the individual interests and needs of each student in the class.

AR 209 The Art of Collage

4 Class Hours 4 Quarter Credit Hours

Powerful imagery is a combination of technical skill and imagination. Students will exercise their ability to manipulate composition and color as well as cultivate the power of imagination in this studio class with a focus on collage, a technique where compositions are crafted by adhering various materials to a backing surface. Creativity and the development of ideas will be explored while acquiring a working knowledge of the elements and principles of art. The assemblage process of collage will be the design tool used to investigate, generate and express ideas. Students will research collage as an art form and examine the creative processes of various artistic disciplines. No prior experience is necessary. Students will be evaluated on their effort and creative growth as opposed to artistic talent.

ACADEMIC SKILLS DEVELOPMENTAL COURSES

DEVELOPMENTAL COURSES

The following four-credit courses do not count toward degree requirements. Students are registered for these courses based on the results of assessments conducted during the admissions process.

AS 044 Reading for a Technology

4 Class Hours 4 Quarter Credit Hours

This course is designed for students who need to build their vocabulary and develop critical reading and thinking skills necessary to succeed in their program courses. The primary focus is on learning strategies to read more quickly with greater comprehension. Students are also introduced to Internet research and oral presentations, and gain practice reading material from Quarter I texts.

EN 030 Basic Writing Skills

4 Class Hours 4 Quarter Credit Hours

This course is for students who need to develop their writing skills before enrolling in EN 101. The focus is on writing short essays that include a main point and supporting evidence.

Students learn the organization of the five-paragraph essay, review grammar, and gain skills in editing and revising their work. Placement in this course is based on the results of students' writing assessments conducted during the admissions process.

MA 041 Pre-College Math

6 Lab Hours 3 Quarter Credit Hours
Co-requisite: MA 042

This course is designed for students who need a thorough review of arithmetic including whole numbers, fractions, and decimals. This course will integrate problem solving related to ratios, proportions and percent. Solving basic equations and operations with signed numbers will be introduced. In addition, this course is intended to familiarize students with the calculator functions related to the applications above.

MA 042 Pre-College Math Tutorial

2 Lab Hours 1 Quarter Credit Hour
Co-requisite: MA 041

This tutorial is designed to give students the opportunity to apply the concepts taught in MA 041 to help facilitate their learning how to solve basic mathematical equations.

ENRICHMENT COURSES

In addition to the college's regular academic courses, the Academic Skills Center offers a variety of enrichment courses for both personal enrichment and professional development. Credits for enrichment courses do not apply toward required graduation credits but do fulfill Financial Aid requirements. For a full listing of the courses offered, please refer to the Web for Students website, speak with your Academic Advisor, or contact the Director of Academic Skills.

AS 011 Information Literacy

1 Class Hour 1 Quarter Credit Hour

This course provides students with a basic set of thinking skills to recognize and determine the nature and extent of information needed for scholarly research. It will provide students the ability to locate or access, evaluate and use information and its sources effectively. It will provide students the means to cite information resources correctly. Discussions of bias, fair use, copyright, and plagiarism will be introduced and incorporated so that students understand legal, social and ethical issues surrounding information and information technology.

AS 015 Academic Skill Building

2 Class Hours 2 Quarter Credit Hours

This enrichment course is designed to help students become active learners and strengthen their college-level writing, critical reading, and study skills. Using college textbooks and materials from their respective programs, participants will engage in activities and assignments that will provide a stronger foundation for their studies and future career.

AS 058 Maximize Your Memory Skills

1 Class Hour 1 Quarter Credit Hour

This course improves students' listening skills and shows them how to take effective classroom notes. In addition, students will learn to develop a personal style for recording various types of lectures. The course also provides students with memory and learning strategies they can use to improve their academic performance.

AS 063 Reading Smarter, Not Harder

1 Class Hour 1 Quarter Credit Hour

This one-credit course focuses on strategies to master the various kinds of reading materials required in college courses. Using reading assignments from their current courses, students will practice techniques such as outlining, graphic organizers, summarizing, questioning, and predicting to read more efficiently and with greater comprehension.

AS 065 English Made Easy

1 Class Hour 1 Quarter Credit Hour

Are you having trouble with English? This enrichment course is designed to improve students' overall proficiency with the English language. Coursework will include instruction and practice in parts of speech, standard language usage, and basic spelling rules. Students will participate in authentic communicative and academic tasks. Language resources will be provided for continuing practice and reference.

AS 070 Intro to Medical Terminology

2 Class Hours 2 Quarter Credit Hours

Would you like to improve your communication with health care professionals? This course introduces students to the basic rules of medical language and provides practice reading, writing, and speaking medical jargon.

AUTOMOTIVE

ATX 115 Automotive Engines

7 Class Hours 7 Quarter Credit Hours
Co-requisite: ATX 117

This course is the study of two- and four-cycle internal combustion engine operation and design. Topics covered are: engine identification, internal components, cooling systems, lubrication systems and preliminary diagnosis of internal noises and excessive smoke. The course begins with discussions of internal failures and moves to practice with engine precision measurement and in-car repairs. In-depth discussions will focus on sealing techniques and engine breathing requirements. The course then progresses to in-car repairs including timing belts and water pumps. Students will study engine fasteners and fastening techniques. In-depth discussions will focus on sealing techniques and engine breathing requirements.

ATX 117 Automotive Engines Lab

6 Lab Hours 2 Quarter Credit Hours
Pre/co-requisite: ATX 115

Students will practice compression and vacuum testing, oil pressure and cooling system examination. Students will learn to identify different engine configurations through the use of VIN or model numbers and will practice finding specifications in service manuals or by using computerized information systems. Students will practice replacement of cylinder head gaskets, water pumps, timing belts and intake manifold gaskets. This course is designed to encourage teamwork and critical thinking skills.

ATX 125 Automotive Electricity and Electronics

7 Class Hours 7 Quarter Credit Hours
Co-requisite: ATX 127

This course is a study of the fundamental theory and application of electrical and electronic principles in the automotive industry. Topics covered include principles of electricity, electrical test equipment, circuit construction, electrical and electronic components, wiring diagrams, basic troubleshooting techniques, starting and charging systems, gauges and sending units, power accessories and supplemental restraint systems. Upon completion, students will be able to properly use electrical testing equipment, wiring diagrams, diagnose, test, and repair electrical concerns. In addition to the subject matter, this course is designed to encourage teamwork, written and verbal communications and critical thinking skills.

ATX 127 Automotive Electricity and Electronics Lab

6 Lab Hours 2 Quarter Credit Hours
Pre/co-requisite: ATX 125

In the lab, students will learn the use of multimeters and other test equipment. Students will diagnose and repair electrical circuits and components. Topics covered include electrical test equipment, circuit construction, electrical and electronic components, wiring diagrams, basic troubleshooting techniques, starting and charging systems, gauges and sending units, power accessories and supplemental restraint systems. Upon completion, students will be able to properly use electrical testing equipment and wiring diagrams to properly diagnose and repair automotive electrical failures. In addition to the subject matter, this course is designed to encourage teamwork, written and verbal communications and critical thinking skills.

ATX 135 Automotive Brakes, Suspension and Steering

7 Class Hours 7 Quarter Credit Hours
Co-requisite: ATX 137

This course covers the principles of operation of drum and disc braking systems. Students will study hydraulic principles, brake inspection, brake bleeding, brake system flushing, and machining practices. This course also introduces students to automotive tires, wheels, suspension components and suspension inspection and alignment. Students will study steering system inspection and service and suspension system component identification, removal and repair.

ATX 137 Automotive Brakes, Suspension and Steering Lab

6 Lab Hours 2 Quarter Credit Hours
Pre/co-requisite: ATX 135

The brake portion of the course covers the principles of operation, servicing and the diagnosing of drum, disc, parking, power assist and anti-lock braking systems. The steering and suspension portion of the course introduces students to automotive frame systems, tires, wheels, suspension components and suspension inspection and alignment. Students will study steering system inspection and service and suspension system component identification, removal and repair.

ATX 222 Automotive Heating and Air Conditioning Systems

3 Lab Hours 1 Quarter Credit Hour
Prerequisites: ATX 125/127 OR AUB 131/132

This course will cover the basic physics concepts of heating, cooling heat transfer and phase changes. It will apply this knowledge to the understanding of engine cooling systems, heating systems and air conditioning systems. Students will apply this knowledge in the lab by testing and servicing these systems.

ATX 225 Automotive Fuel and Ignition Systems

7 Class Hours 7 Quarter Credit Hours
Prerequisites: ATX 115/117, ATX 125/127, TT 105
Co-requisite: ATX 227

Students are introduced to the air and fuel requirements of the internal combustion engine. Storage tanks, lines and fittings, electric/mechanical fuel pumps, electronic fuel injection theory and operation will be discussed. The computer network and scan tool operation as it applies to the fuel system will also be discussed. Students will be introduced to the diagnosis and repair of advanced electronic and computerized ignition systems found on the modern-day internal combustion engine. The study of the components and operation of the engine man-

agement system used on today's cars will be major topics of discussion in class.

ATX 227 Automotive Fuel and Ignition Systems Lab

6 Lab Hours 2 Quarter Credit Hours
Prerequisites: ATX 115/117, ATX 125/127, TT 105
Pre/co-requisite: ATX 225

Students will practice fuel tank removal and installation and fuel pump removal and installation. They will also practice the diagnosis and repair of all types of electronic fuel injection. Routine service procedures, i.e. fuel injection cleaning/de-carbonizing, will also be practiced. Students will be required to use state-of-the-art tools and service equipment commonly used in the trade. Students will also practice scan tool operation and use these and other common tools and diagnostic equipment to troubleshoot and service modern ignition and fuel systems.

ATX 235 Automotive Engine Performance Diagnosis

7 Class Hours 7 Quarter Credit Hours
Prerequisites: ATX 225/227
Co-requisite: ATX 237

This course will cover the complete computerized engine management systems (i.e., ignition, fuel, and emissions) and self-diagnostics. OBD II (on-board diagnostics generation 2) and drive-cycle monitors will be discussed, as well as advanced testing procedures using lab scopes, scan tools and other tools and equipment common to the repair and service trade. The course will also focus on the diagnosis and repair of drivability problems associated with chassis and body computer control systems. Modern-day vehicles have a number of computers that control ride, traction, braking, shift patterns, interior safety and comfort. This course will examine each of these computer-controlled systems and the diagnosis and repair of these systems using advanced testing procedures and diagnostic equipment.

ATX 237 Automotive Engine Performance Diagnosis Lab

6 Lab Hours 2 Quarter Credit Hours
Prerequisites: ATX 225/227
Pre/co-requisite: ATX 235

Students will be required to diagnose and repair various drivability problems using scan tools, lab scopes and other state-of-the-art tools and equipment. They will also be required to diagnose and repair emissions related failures using 5-gas analyzers. Students will be required to diagnose and repair various problems associated with ride, traction, braking, shift patterns, interior safety and comfort using scan tools, lab scopes and other modern-day equipment and tools normally found in the service trade.

AUTOMOTIVE COLLISION REPAIR

AUB 101 Fundamentals of Auto Body Metal Repair

3 Class Hours 3 Quarter Credit Hours
Co-requisites: AUB 103, AUB 118

Students will learn the proper and safe use of hand and power tools specific to the auto body trade. Students will learn the concepts of straightening sheet metal components and practice the proper use of various auto body refinishing materials and equipment.

AUB 103 Fundamentals of Auto Body Metal Repair Lab

4 Lab Hours 1 Quarter Credit Hour
Pre/co-requisite: AUB 101

In the lab, students will practice the concepts they learned in AUB 101. Students will be assigned an auto body component and will demonstrate their ability to correctly apply refinishing materials using specialized equipment. Students will also practice using hand and power tools specific to the automotive collision repair industry.

AUB 118 Welding for Collision Repair

3 Lab Hours 1 Quarter Credit Hour

This course is intended to teach students the fundamentals of using both oxy/acetylene and electric welding equipment. Students will learn the three different classes of welding, safety precautions associated with each class and will practice basic welding, brazing and cutting techniques.

AUB 122 Brakes and Suspension Systems for Collision Students

4 Class Hours 4 Quarter Credit Hours
Co-requisite: AUB 123

This course covers the principles of operation of drum and disc braking systems including the study of hydraulic principles, brake inspection, brake bleeding, brake system flushing and machining practices. In addition, this course introduces students to automotive frame systems, tires, wheels, suspension components and suspension inspection and alignment. Students will study steering system inspection and service and suspension system component identification, removal and repair.

AUB 123 Brakes and Suspension Systems for Collision Students Lab

4 Lab Hours 1 Quarter Credit Hour
Pre/co-requisite: AUB 122

Students will practice drum and disc machining, caliper ser-

vice and brake inspections in the lab. They will also be introduced to anti-lock braking systems and servicing. Students will practice rebuilding wheel cylinders, calipers and master cylinders to manufacturers' specifications. They will also learn tire dismounting and mounting, balancing and service of run-flat design tires. Students will practice removal and installation of steering components and will also study suspension system component removal and replacement in the lab; and practice wheel replacement and alignment using a variety of state-of-the-art equipment.

AUB 127 Introduction to Airbrushing

1 Class Hour 3 Lab Hours 2 Quarter Credit Hours
Prerequisites: AUB 243/245, AUB 253/254

This course is designed for the person who has no airbrush experience and for those who have used an airbrush before but want to learn new techniques. Instruction will cover how to handle the airbrush, the hook-up and maintenance procedure for double action brushes, how to render in black, white and color and more. Through a series of pre-printed exercises, students will learn glazing techniques, mixing of products and media and to work with stencils and templates.

AUB 128 Custom Modifications I

2 Class Hours 4 Lab Hours 3 Quarter Credit Hours

Custom car design and building allows students to express themselves in a creative way. Students will gain minor fabrication skills using sheet metal. Students will be exposed to body kits and their installation. Also, students will learn the art of removing door hardware and installing electric door openers. The installation of Lambo doors and suicide doors will be demonstrated and explained. The class will discuss the art of chopping a roof of an automobile. There is no end to the possibilities of custom car design.

AUB 129 Advanced Airbrushing Techniques

1 Class Hour 3 Lab Hours 2 Quarter Credit Hours
Prerequisite: AUB 127

This course expands on the techniques mastered in AUB 127. Instruction will cover how to render in color and more. Through a series of pre-printed exercises, students will practice glazing techniques, mixing of products and media and to work with stencils and templates. Emphasis will be on illustrations and custom ornate work on large surface areas as well as multi-level illustrations.

AUB 130 Custom Modifications II

2 Class Hours 4 Lab Hours 3 Quarter Credit Hours

After the completion of sheet metal work and design comes the painting techniques students will use in finishing a custom project. Steps in preparing the panel for custom finishes will be demonstrated and practiced. Students will develop a unique illustration and geometric designs for their project.

Specific topics addressed include application of candy finish, how to create traditional and realistic flames. The use of templates and a wide variety of masking techniques to create a custom paint finish will be practiced.

AUB 131 Basic Electricity for the Collision Trade

3 Class Hours 3 Quarter Credit Hours
Co-requisite: AUB 132

This course covers electrical fundamentals from "What is Electricity?" to basic troubleshooting techniques. Topics covered will be: how electricity is produced, types of electricity, Ohm's Law, basic circuit construction, conductors, insulators, induction, battery construction and testing, alternators, starters, lighting systems, electrical testing tools and diagnosis of circuit problems.

AUB 132 Basic Electricity for the Collision Trade Lab

3 Lab Hours 1 Quarter Credit Hour
Pre/co-requisite: AUB 131

In the lab, students will learn the use of multimeters and other test equipment to diagnose and repair electrical circuits and components including lights, gauges, solenoids, relays, voltage regulators, motors and generators. Students will be instructed in the correct methods of constructing circuits, testing batteries, charging systems and starting systems.

AUB 136 Fundamentals of Paints and Refinishing Equipment Lab

4 Lab Hours 1 Quarter Credit Hour
Pre/co-requisite: AUB 137

Students will practice surface preparation such as masking techniques, surface preparation, preparing sprayable materials, spraying different consistencies of paints and primers and cleaning and storing painting equipment and supplies.

AUB 137 Fundamentals of Paints and Refinishing Equipment

2 Class Hours 2 Quarter Credit Hours
Co-requisite: AUB 136

Students will learn spray equipment handling, operation and care. Students will practice spraying various consistencies of paints from undercoats to topcoats. Students will learn personal health safety and spray booth operation.

AUB 145 Glass and Non-Structural Panel Replacement

3 Class Hours 3 Quarter Credit Hours
Prerequisites: AUB 101/103
Co-requisite: AUB 146

Students will be instructed in the proper methods used in the removal and replacement of auto glass, interior moldings, interior hardware and exterior trim. Demonstrations will include proper installation of exterior panels as well as adjustments on hoods, fenders, doors and deck lids.

AUB 146 Glass and Non-Structural Panel Replacement Lab

3 Lab Hours 1 Quarter Credit Hour
Prerequisites: AUB 118, AUB 101/103
Pre/co-requisite: AUB 145

In the lab, students will practice the concepts they learned in AUB 145. Students will demonstrate the ability to properly install a non-structural panel to manufacturer's specifications. Students will also perform adjustments on hoods, fenders, doors and deck lids to achieve proper fit.

AUB 152 Introduction to Structural Repairs and Component Replacement

4 Class Hours 4 Quarter Credit Hours
Prerequisites: AUB 118, AUB 101/103, AUB 137/136
Co-requisite: AUB 153

In this course, students will learn vehicle frame and body design from full-frames to unibody construction and the proper methods used in the removal and replacement of such structural components as quarter panels and door skins. Demonstrations will include the operation of hydraulic straightening equipment, straightening techniques, straightening structural components and replacement of door skins and/or quarter panels on live vehicles or replacement doors. Students will be instructed in sectioning of stationary mild and H.S.S. steel panels.

AUB 153 Introduction to Structural Repairs and Component Replacement Lab

8 Lab Hours 2 Quarter Credit Hours
Prerequisites: AUB 118, AUB 101/103, AUB 137/136
Pre/co-requisite: AUB 152

Students will demonstrate the ability to properly operate hydraulic straightening equipment and will practice straightening techniques and straightening structural components in the collision repair lab. Students will be instructed in, and practice sectioning of, stationary mild and H.S.S. steel panels. They will also demonstrate their ability to replace door skins and/or quarter panels on live vehicles or replacement doors.

AUB 154 Major and Minor Frame and Structural Straightening

4 Class Hours 4 Quarter Credit Hours
Prerequisites: AUB 137/136, AUB 145/146, AUB 152/153
Co-requisite: AUB 155

Students will be instructed in full-frame and unibody straightening on vehicles using the portable and stationary frame straightening equipment. Instruction will also cover the procedures used in the repair of major collision damage repair, the use and operation of a body and frame bench, and the methods used to verify specifications and measurement. Those skills will be used to repair vehicles with major collision damage using universal measuring systems in the automotive collision repair lab.

AUB 155 Major and Minor Frame and Structural Straightening Lab

8 Lab Hours 2 Quarter Credit Hours
Prerequisites: AUB 137/136, AUB 145/146, AUB 152/153
Pre/co-requisite: AUB 154

Students will be asked to demonstrate the knowledge gained in AUB 154 and to perform frame straightening on either unibody or full-frame vehicles. They will also demonstrate their ability to use the universal measuring system to correctly verify specifications and measurement of a vehicle with major collision damage and return a damaged vehicle to factory specification. Vehicle type and design will depend on vehicle availability.

AUB 156 Plastic Panel and SMC Repair

3 Class Hours 3 Quarter Credit Hours
Prerequisites: AUB 101/103, AUB 137/136, AUB 145/146
Co-requisite: AUB 157

In this course, students will learn the process for repairing various plastic components used on modern automobiles. Students will be instructed in the use of plastic welders and plastic adhesives to perform repairs on both rigid and flexible components to industry standards. Students will also be instructed in the repair and replacement of Sheet Molded Composite (SMC) panels.

AUB 157 Plastic Panel and SMC Repair Lab

3 Lab Hours 1 Quarter Credit Hour
Prerequisites: AUB 101/103, AUB 137/136, AUB 145/146
Pre/co-requisite: AUB 156

Students will practice repairing plastic components using plastic welders and special adhesives particular to the automotive industry. Students will also practice replacing SMC components and panels and refinishing them to manufacturer's specifications and industry standards.

AUB 243 Multi-Stage Paint Applications

4 Class Hours 4 Quarter Credit Hours
Prerequisites: AUB 101/103, AUB 137/136
Co-requisite: AUB 245

Students will practice mixing two- and three-stage paints using computerized mixing equipment. Students will demonstrate their ability to identify colors using vehicle color codes and determine the type of paint presently on the vehicle.

AUB 245 Multi-Stage Paint Applications Lab

4 Lab Hours 1 Quarter Credit Hour
Prerequisites: AUB 101/103, AUB 137/136
Pre/co-requisite: AUB 243

Students will demonstrate their ability to mix primers and paints with related additives and apply them to properly pre-pared vehicle surfaces. To do this, students will be asked to demonstrate their ability to identify colors from vehicle paint codes and mix paints using the computerized mixing equipment and blend newly-applied paint into previously painted panels.

AUB 253 Paint and Refinishing Applications

4 Class Hours 4 Quarter Credit Hours
Prerequisites: AUB 101/103, AUB 137/136
Co-requisite: AUB 254

Students will practice preparing various types of surfaces to accept the application of paint finishes. Students will inspect, clean, and determine the condition and adequacy of spray guns and related material and equipment. Demonstrations will include instruction in the mixing of primers and paints and the use of computerized mixing equipment.

AUB 254 Paint and Refinishing Applications Lab

4 Lab Hours 1 Quarter Credit Hour
Prerequisites: AUB 101/103, AUB 137/136
Pre/co-requisite: AUB 253

Students will practice mixing primers and single-stage paints for consistency and application. Students will use computer-ized mixing equipment to obtain proper chemical compounds. Students will also practice the application of primers and paints to vehicle surfaces to achieve a finish consistent with industry standards.

AUB 261 Assessing Damage and Estimating Repairs

3 Class Hours 3 Quarter Credit Hours
Prerequisites: AUB 156/157

This class is designed for students who have completed all aspects of the repair and refinishing portion of their Automo-tive Collision Repair curriculum. This course prepares students to write estimates of repair using collision crash guides, parts sources, and other available types of literature for various makes of vehicles. Students will also be instructed in the lat-est software available for the estimation of vehicle repairs.

AUB 265 Custom Air Brush Art

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours

This course is designed for the person who has no airbrush experience and for those who have used an airbrush before but want to learn new techniques. Instruction will cover how to handle the airbrush, the hook-up and maintenance proce-dure for double action brushes, how to render in black, white and color and more. Through a series of pre-printed exercises students will learn glazing techniques, mixing of products and media and to work with stencils and templates.

AUTOMOTIVE

AUT 103 Automotive Engines

7 Class Hours 7 Quarter Credit Hours

This course is the study of two- and four-cycle internal com-bustion engine operation and design. Topics covered are: en-gine identification, internal components, cooling systems, lu-brication systems and preliminary diagnosis of internal noises and excessive smoke. The course begins with discussions of internal failures and moves to practice with engine precision measurement and in-car repairs. In-depth discussions will fo-cus on sealing techniques and engine breathing requirements. The course then progresses to in-car repairs including timing belts and water pumps. Students will study engine fasteners and fastening techniques. In-depth discussions will focus on sealing techniques and engine breathing requirements.

AUT 104 Automotive Engines Lab

8 Lab Hours 2 Quarter Credit Hours

Students will practice compression and vacuum testing, oil pressure and cooling system examination. Students will learn to identify different engine configurations through the use of VIN or model numbers and will practice finding specifications in service manuals or by using computerized information sys-tems. Students will practice disassembly of major components and replacement of cylinder head gaskets, water pumps, tim-ing belts and intake manifold gaskets.

AUT 105 Automotive Electricity and Electronics

7 Class Hours 7 Quarter Credit Hours

This course is a study of the fundamental theory and appli-cation of electrical and electronic principles in the automo-tive industry. Topics covered include principles of electricity, electrical test equipment, circuit construction, electrical and electronic components, wiring diagrams, basic troubleshoot-ing techniques, starting and charging systems, gauges and sending units, power accessories and supplemental restraint systems. Upon completion, students will be able to properly use electrical testing equipment, wiring diagrams, diagnose, test, and repair electrical concerns. In addition to the subject matter, this course is designed to encourage teamwork, writ-ten and verbal communications and critical thinking skills.

AUT 106 Automotive Electricity and Electronics Lab

8 Lab Hours 2 Quarter Credit Hours

In the lab, students will learn the use of multimeters and other test equipment. Students will also build, diagnose and repair electrical circuits and components. Topics covered include electrical test equipment, circuit construction, electrical and electronic components, wiring diagrams, basic troubleshoot-ing techniques, starting and charging systems, gauges and sending units, power accessories and supplemental restraint systems. Upon completion, students will be able to properly use electrical testing equipment, wiring diagrams, diagnose, test, and repair electrical concerns. In addition to the subject matter, this course is designed to encourage teamwork, writ-ten and verbal communications and critical thinking skills.

AUT 107 Automotive Brakes, Suspension and Steering

8 Class Hours 8 Quarter Credit Hours

This course covers the principles of operation of drum and disc braking systems. Students will study hydraulic principles, brake inspection, brake bleeding, brake system flushing, and machining practices. This course also introduces students to automotive frame systems, tires, wheels, suspension compo-nents and suspension inspection and alignment. Students will study steering system inspection and service and suspension system component identification, removal and repair.

AUT 108 Automotive Brakes, Suspension and Steering Lab

8 Lab Hours 2 Quarter Credit Hours

The brake portion of the course covers the principles of op-eration, servicing and the diagnosing of drum, disc, parking, power assist and anti-lock braking systems. The steering and suspension portion of the course introduces students to auto-motive frame systems, tires, wheels, suspension components and suspension inspection and alignment. Students will study steering system inspection and service and suspension system component identification, removal and repair.

AUT 114 Oxy and Electric Welding and Cutting

3 Lab Hours 1 Quarter Credit Hour

This course is intended to teach students the fundamentals of using both oxy/acetylene and electric welding equipment. Stu-dents will learn the three different classes of welding, safety precautions associated with each class and will practice basic welding, brazing and cutting techniques.

AUT 209 Automotive Fuel and Ignition Systems

8 Class Hours 8 Quarter Credit Hours
Prerequisites: AUT 103/104, AUT 105/106, TT 105
Co-requisite: AUT 210

Students are introduced to the air and fuel requirements of the internal combustion engine. Storage tanks, lines and fittings, electric/mechanical fuel pumps, electronic fuel injection, and carburetor theory and operation will be discussed as well as all related components. The computer network and scan tool operation as it applies to the fuel system will also be discussed. Students are also introduced to the diagnosis and repair of advanced electronic and computerized ignition systems found on the modern day internal combustion engine. They will study the components and operation of the engine management system used on today's cars.

AUT 210 Automotive Fuel and Ignition Systems Lab

12 Lab Hours 4 Quarter Credit Hours
Prerequisites: AUT 103/104, AUT 105/106, TT 105
Pre/co-requisite: AUT 209

Students will practice fuel tank removal and installation and fuel pump removal and installation. They will also practice the diagnosis and repair of all types of electronic fuel injection. Routine service procedures, i.e. fuel injection cleaning/de-carbonizing, will also be practiced. Students will be required to use state-of-the-art tools and service equipment commonly used in the trade. Students will also practice scan tool operation and use these and other common tools and diagnostic equipment to troubleshoot and service modern ignition and fuel systems.

AUT 215 Automotive Powertrains

6 Class Hours 6 Quarter Credit Hours
Prerequisites: TT 105 and AUT 105/106 or (ATX 115/117, ATX 125/127, ATX 135/137)
Co-requisite: AUT 219

Students will study the design and theory of operation of automatic and manual front and rear wheel transmissions and transaxles. Students will be able to identify all of the component parts within the transmission as well as be able to demonstrate an ability to correctly explain the operating principles of each assembly.

AUT 219 Automotive Powertrains Lab

8 Lab Hours 2 Quarter Credit Hours
Prerequisites: TT 105 and AUT 105/106 or (ATX 115/117, ATX 125/127, ATX 135/137)
Pre/co-requisite: AUT 215

Students will practice disassembly and reassembly of front and rear wheel drive automatic transmissions and transaxles. Students will also demonstrate an ability to correctly identify rear end, final drive, driveshaft, and drive axle service and maintenance procedures.

AUT 220 Advanced Powertrains

1 Class Hour 3 Lab Hours 2 Quarter Credit Hours
Pre/co-requisites: AUT 215/219

In this course, students will study the different types of four wheel drive systems. Topics covered will include four wheel drive rear axles and transaxles, transfer case vacuum and electric controls, and clutch removal and installation. Students will practice diagnosis and repair of electronic and vacuum control systems as well as transfer case rebuilding.

AUT 221 Automotive Engine Performance Diagnosis

8 Class Hours 8 Quarter Credit Hours
Prerequisites: AUT 209/210
Co-requisite: AUT 222

This course will cover the complete computerized engine management systems (i.e., ignition, fuel, and emissions) and self-diagnostics. OBD II (on-board diagnostics generation 2) and drive-cycle monitors will be discussed, as well as advanced testing procedures using lab scopes, scan tools and other tools and equipment common to the repair and service trade. The course will also focus on the diagnosis and repair of drivability problems associated with chassis and body computer control systems. Modern day vehicles have a number of computers that control ride, traction, braking, shift patterns, interior safety and comfort. This course will examine each of these computer-controlled systems and the diagnosis and repair of these systems using advanced testing procedures and diagnostic equipment.

AUT 222 Automotive Engine Performance Diagnosis Lab

12 Lab Hours 4 Quarter Credit Hours
Prerequisites: AUT 209/210
Pre/co-requisite: AUT 221

Students will be required to diagnose and repair various drivability problems using scan tools, lab scopes and other state-of-the-art tools and equipment. They will also be required to diagnose and repair emissions-related failures using 5-gas analyzers. Students will be required to diagnose and repair various problems associated with ride, traction, braking, shift patterns, interior safety and comfort using scan tools, lab scopes and other modern day equipment and tools normally found in the service trade.

AUT 251 Internship/Practical Experience

20 Internship Lab Hours 4 Quarter Credit Hours

This course is designed for students who have completed the majority of their automotive studies and wish to hone their skills in the work environment. Employers will be matched with students based on interest/ability levels to assist students to improve their mechanical skill in the work environment.

AUT 261 Introduction to Natural Gas Vehicles

3 Lab Hours 1 Quarter Credit Hour
Prerequisites: AUT 209/210, AUT 221/222

This course will focus on the following areas: the origins and properties of natural gas; gas composition; defining the combustion process of natural gas as opposed to gasoline or diesel fuel; the handling of fuels and related safety precautions; tank construction; performance of general maintenance procedures; tank installation; general operation and function of regulators, mixers, solenoids, and electronic components; NFPA-52 regulations; and defining the role of the NGV technician. Students will perform a CNG vehicle conversion and initial set-up procedures using data gathered by exhaust gas emissions analysis.

AUT 262 Introduction to Hybrid Vehicles

1 Class Hour 3 Lab Hours 2 Quarter Credit Hours
Prerequisites: AUT 209/210 or ATX 225/227

This course will cover the theory and operation of hybrid electric vehicles. While this course will focus on hybrid electric vehicles, different types of alternative fuel vehicles will be introduced as well. Safety procedures and common services to hybrid electrics will be discussed as well as specific tool usage as they pertain to high voltage systems.

AUT 263 NVH Principles and Diagnostics

1 Class Hour 3 Lab Hours 2 Quarter Credit Hours
Prerequisites: TT 105, AUT 103/104, AUT 107/108, MA 100/110

In this course, students will learn to identify and diagnose noise, vibration, and harshness issues as they apply to vehicle ride quality, vehicle operation and customer perception. Students will become proficient using various tools designed to detect noise, vibration, and harshness and determine the corrective repairs.

AUT 271 Introduction to High Performance Vehicles

6 Class Hours 6 Quarter Credit Hours
Prerequisites: AUT 221 or ATX 235

This course will cover an introduction to horsepower, airflow through an engine and exhaust systems. Dynomometer testing of vehicles prior to modification will be discussed and practiced as well as modifications which can be made to most vehicles. Students will practice testing vehicles, making engine, exhaust and suspension modification and retesting vehicles to measure results.

AUT 272 Introduction to High Performance Vehicles Lab

8 Lab Hours 4 Quarter Credit Hours
Prerequisite: AUT 221 or ATX 235
Students will practice testing vehicles, making engine, exhaust and suspension modifications and retesting vehicles to measure results.

AUT 275 Automotive Heating and Air Conditioning Systems

1 Class Hour 3 Lab Hours 2 Quarter Credit Hours
Prerequisite: TT 105
Pre/Co-requisite: AUT 105/106 or AUB 131/132
This course will cover the basic physics concepts of heating, cooling heat transfer and phase changes. It will apply this knowledge to the understanding of engine cooling systems, heating systems and air conditioning systems. Students will apply this knowledge in the lab in the testing and servicing of these systems.

AUT 276 Light Duty Diesel Diagnostics and Repair

1 Class Hour 3 Lab Hours 2 Quarter Credit Hours
Prerequisites: TT 105 and AUT 103/104/105/106
or ATX 115/117/125/127
This course covers the principles of operation of light duty diesel vehicles. The class will focus on: basic diesel operation, preventive maintenance, high and low pressure fuel systems, high and low pressure lubricating systems, intake and exhaust systems and emission controls. Content learned in the classroom will be applied in the lab.

AUT 277 Vehicle Service Practices with Career Preparation

1 Class Hour 3 Lab Hours 2 Quarter Credit Hours
Prerequisites: AUT 103/104, AUT 105/106, AUT 107/108
& Instructor Approval
This course will review and expand on basic shop skills that entry-level automotive technicians will be expected to perform. Students will review skills taught in previous quarters and bring their proficiency up to new levels. While there will be some classroom instruction, the main focus will be hands-on work in the lab.

AUT 280 Advanced Troubleshooting

1 Class Hour 3 Lab Hours 2 Quarter Credit Hours
Prerequisites: AUT 103/104, AUT 209/210
This course is designed for students who have completed the majority of their automotive studies and want to hone their diagnostic skills. This course is lab-based and focuses on automotive drivability problems and will consist of a large amount of hands-on practical problems.

AUT 300 Industry Software Applications I

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: TT 105 or MT 105 and IT 111 or by permission of the department chair.
Students are introduced to industry software packages such as ALLDATA and Mitchell1 to track work orders, customer service intervals, recalls, and warranty updates. Students practice communications with consumers as well as other departments within the dealership. Students hone communication skills with a focus on persuasive writing in a fast-paced electronic office. Additional focus will be on setting up a customer database in Outlook, in which students create and organize contacts, manage distribution lists, and manage mail folders and archives.

AUT 302 Service Management Operations

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
High-quality service operations require effective management teams. This course gives students an understanding of management operations in today's high performing dealerships. Students study time management, benchmarking and best practices, internal operations, compensation management and physical operations, as well as insurance issues faced in the automotive environment. Students work in teams and role-play to learn the concepts of leadership through motivation.

AUT 304 Industry Software Applications II

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisite: AUT 300
Students are introduced to advanced industry software programs to track work orders, customer service intervals, recalls, and warranty updates. Students create a customer database for mailings, service reminders, and recall information. Students also create reports to monitor technician efficiency and profitability. Additionally, students track expenses and performance of the service department.

AUT 305 Sales and Customer Relations

4 Class Hours 4 Quarter Credit Hours
High-quality service in today's automotive industry is defined by the customer's experience at the dealership. Operational excellence ensures that the customer's car will be ready when promised and fixed correctly the first time. Selling service is perhaps the most difficult of all sales and begins when the customer responds to an advertisement or visits the dealership. The Service Writer is often the first person the customer encounters. This course gives students an understanding of the relationship between the dealership and the customer. The course teaches the concepts of integrity-based sales to achieve customer loyalty. The course will also train students to strive for high-quality service and customer satisfaction.

AUT 306 Environmental Health and Safety

3 Class Hours 3 Quarter Credit Hours
This course covers the responsibilities of the service department to provide their employees with Right-to-Know training and Hazardous Materials Communication. Students learn the governmental requirements for Right-to-Know training and practice developing a hazard communication plan for a small service business.

AUT 401 Warranty Administration

3 Class Hours 3 Quarter Credit Hours
Today, with automobiles having 100,000-mile warranties, more and more vehicles coming into the shop are covered under warranty. It has become a necessity in many shops today to have at least one person to manage the tracking and collection of warranty claims. This position interacts directly with the manufacturer so that claims are approved and paid to the dealership. Communication and attention to detail are extremely important in this position. Students improve their business-to-business communication skills learned in AUT 300.

AUT 402 Inventory Management

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Today's service shops struggle to have the correct parts in sufficient quantity to keep their technicians productive. With extended service hours, the prospect of having parts delivered during the repair process is not always possible. Students in this course learn the aspects of inventory control, just-in-time purchasing, dealing with jobbers and wagon vendors, tracking cores, core charges, and credits.

AUT 403 Introduction to Senior Internship

2 Class Hours 2 Quarter Credit Hours
Prerequisites: ACC 311, AUT 300, AUT 302, AUT 304, AUT 305, AUT 306, AUT 401, IT 375, MGM 160, MGM 311, MGM 314, MGM 330, MGM 335
This course covers job-interviewing skills including writing the resume, references, cover letter, and thank-you letter. Students apply for three internship placements and interview for the position with their possible mentor. This course prepares students for their internship experience in Quarter XII and familiarizes them with the requirements and expectations of internship. This course provides a seamless transition into AUT 410 Senior Internship.

AUT 404 Legal Issues and the Dealership

3 Class Hours 3 Quarter Credit Hours
Prerequisite: BU 236
This course focuses on the legal aspects of running a service department. Such topics as signatures on repair orders, mechanic's liens, and lemon laws are discussed. Students research current practices and develop an outline of service department best practices.

AUT 405 ASE Test Preparation

2 Class Hours 2 Quarter Credit Hours

This course prepares ASM students for the National Institute of Automotive Service Excellence (ASE) examination as a service consultant and/or parts manager. Students practice taking ASE-style examinations and review the material from their past five quarters concerning safety, employee management, and customer service.

AUT 410 Senior Internship

1 Class Hour 20 Lab Hours 5 Quarter Credit Hours
Prerequisites: AUT 402, AUT 403, MGM 430

Students spend 20 hours per week at their internship placement honing their skills under the supervision of a jobsite mentor. Students have an active role in the scheduling of work for technicians and the interaction with the customers. Students meet periodically with the internship advisor to discuss their work experiences. Students complete a writing project evaluating their experiences and will present this report to the faculty and their classmates at the completion of the quarter.

BIOLOGY

BIO 100 Anatomy & Physiology I

4 Class Hours 4 Quarter Credit Hours

This course presents a comprehensive study of the structure and function of the human body as a whole, emphasizing the normal which will serve as a background for the application of scientific principles both in everyday life and in the work of various health disciplines. Systems covered include integumentary, skeletal, muscular, nervous, and endocrine with respect to both histological and gross anatomy.

BIO 101 Anatomy and Physiology I Lab

4 Lab Hours 2 Quarter Credit Hours

Laboratory practice includes the study of tissues by using microscopic examinations and the dissection of animal specimens, along with histological experimentation. Units covered are concerned with general introductory material, the skeletal, muscular, endocrine, and nervous systems.

BIO 107 Comprehensive Anatomy and Physiology I and Lab

4 Class Hours 4 Lab Hours 6 Quarter Credit Hours

This course is a comprehensive study of the anatomy (structure) and physiology (function) of the human body. Based on the interrelationship of related concepts, students will master the complementary nature that anatomy has to physiology. Topics will include orientation to the body as a whole, skin, bones, joints, muscles, nerves and glands. Laboratory practice includes the study of tissues by using microscopic examinations and the dissection of animal specimens, along with his-

tological experimentation. Units covered are concerned with general introductory material, the skeletal, muscular, endocrine, nervous, and sensory systems.

BIO 116 Introduction to Biology

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours

This is a survey course intended to provide students with a firm foundation in the scientific method of inquiry. Basic biologic topics presented will include the nature and history of scientific study, diversity of organisms, basic cellular structure and function, evolution, population biology, plant biology, ecology, reproduction/development, and genetics. Scientific literacy will be developed, providing students with an appreciation of and ability to interpret ongoing scientific research.

BIO 120 Anatomy & Physiology II

4 Class Hours 4 Quarter Credit Hours

This course is a continuation of Anatomy & Physiology I, concentrating on the circulatory, respiratory, digestive, urinary, and reproductive systems.

BIO 121 Anatomy and Physiology II Lab

4 Lab Hours 2 Quarter Credit Hours

Emphasis is placed on association, correlation, critical thinking and overview of the body as a whole functioning unit, with units covering circulatory, respiratory, digestive, urinary, and reproductive systems.

BIO 122 Microbiology

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours

The morphology, physiology and pathology of microbial organisms are covered along with dynamics of microbial populations. Emphasis is placed on disease causation and implications for health care providers.

BIO 127 Comprehensive Anatomy and Physiology II and Lab

4 Class Hours 4 Lab Hours 6 Quarter Credit Hours
Prerequisites: BIO 107

A continuation of Anatomy and Physiology I, this course concentrates on the in-depth coverage of the circulatory, respiratory, digestive, urinary and reproductive systems, from the Nursing perspective. In the laboratory portion of the course, emphasis is placed on association, correlation, critical thinking and overview of the body as a whole functioning unit and of the interrelationship of the systems of the body.

BIO 130 Pharmacology

3 Class Hours 3 Quarter Credit Hours

Presentation of the basic concepts of pharmacology with emphasis on the biological factors affecting the action of drugs, factors modifying drug response, and drug interactions. Basic fundamental principles of chemistry are covered as necessary background material.

BIO 131 Pathophysiology

2 Class Hours 2 Quarter Credit Hours
Prerequisite: BIO 100/101, BIO 120/121

An introduction to the process of disease and its effects on the body, and the basic responses of cells, tissues, and organ systems to these disorders. General phenomena such as inflammation, immune response, and carcinogenesis will be considered as well as a survey of disorders common to the clinical setting characteristic of the various organ systems using a system by system approach.

BIO 132 Nutrition

4 Class Hours 4 Quarter Credit Hours

This course begins with a basic overview of the biochemistry necessary to understand the biology of nutrition. It is designed to provide students with an understanding of the functions of food in the promotion and maintenance of health and in the treatment of specific disease states. Topics covered include the composition and function of the major food groups, vitamins and minerals, product label interpretation, nutritional requirements throughout the life cycle, and nutrition's role in wellness and disease. A brief assessment of the economic, cultural, social, and psychological factors affecting good nutrition is also included.

BIO 133 Pharmacology I

3 Class Hours 2 Lab Hours 4 Credit Hours

This course covers pharmacological terms and concepts related to the nervous system (peripheral and central) and the cardiovascular system, along with dosage calculations, specialty populations, and drugs related to these systems, including trade and generic names, indications, classifications, forms, and dosing.

BIO 231 Comprehensive Pathophysiology

4 Class Hours 4 Quarter Credit Hours
Prerequisite: BIO 127

This course provides an in-depth study of human pathological processes and their effects on homeostasis. General concepts of disease, including etiology, pathogenesis, inflammation, wound healing and clinical diagnosis are covered, allowing a systems-oriented approach to conditions affecting the musculoskeletal, cardiovascular, renal, nervous, gastrointestinal, endocrine, and immune systems. Emphasis is placed on select illnesses most often encountered by health care professionals. This course will combine lectures and student-centered learning for an in-depth exploration of this foundational science. Students will have the opportunity to reinforce and expand upon their knowledge base.

BIO 233 Pharmacology II

3 Class Hours 2 Lab Hours 4 Credit Hours
Prerequisite: BIO 133

This course covers the medical terms and concepts related to the immune, respiratory, gastrointestinal, endocrine, vascular and renal systems, along with the drugs related to these systems, including trade and generic names, indications, classifications, forms, and dosing. The pharmacology of infectious diseases and antineoplastics is also discussed.

BIO 374 Pathophysiology: A Clinical Approach

4 Class Hours 4 Quarter Credit Hours

This course presents the background and critical thinking skills essential for the holistic model of pathophysiologic principles within a systems framework related to the biological, psychological, social, and spiritual dimensions of health, including cultural and developmental determinants across the lifespan. Its emphasis is focused on the mechanisms and concepts of selected pathological disturbances to the human body and the specific pathological conditions that effect the functioning of the system involved as well as its impact on all other body systems. The application of selected principles from the physical and social sciences are incorporated throughout the course. Emphasis is placed on assisting students to develop clinical reasoning skills that prepare them to provide nursing care safely and with a commitment to quality.

BIO 440 Functional Neuroscience

4 Class Hours 4 Quarter Credit Hours
Prerequisites: BIO 100/101, BIO 120/121 or their equivalent

This course provides students with an advanced understanding the anatomy and physiology of the central and peripheral nervous systems and how disorders in these systems affect a person's ability to function in everyday life. Topics include special senses, motor control, perceptual and cognitive processing and emotion.

BUSINESS (SOCIAL SCIENCES CORE)

BU 236 Small Business and the Law

4 Class Hours 4 Quarter Credit Hours

This course is designed for those students who intend to start and operate their own small business. This course will focus on the various elements associated with the start-up, acquisition and operation of a small business from the entrepreneurial point of view. Topics to be covered will include business formation, contract negotiations and drafting, financing, employee discrimination issues, customer relations issues, licensing, permits and tax basics. Additionally, students will be asked to complete a legal research assignment and prepare and present a business plan in their particular technological field of study.

COMMUNITY ENRICHMENT

CE 101 Community Enrichment

1 Class Hour 1 Quarter Credit Hour

In this course, which is part of the Feinstein Enriching America Program, each student will explore ways of enhancing the community through performing a project which provides a service to the community. The project, which may be performed over several quarters, will be documented in a journal in which students will reflect on the significance of the experience.

CE 301 Community Enrichment

1 Quarter Credit Hour
Must be taken with EN 331

CE 301 Community Enrichment, a Feinstein Enriching America Program, is a bachelor-level one-credit option offered as a co-requisite of EN 331 Research Writing. The course addresses the concepts of civic responsibility, social issues, and personal values. Students will be required to engage in a service experience and submit a reflective research paper on the topic of the service experience.

CIVIL ENGINEERING TECHNOLOGY

CET 110 Introduction to Civil Engineering Technology

3 Class Hours 3 Quarter Credit Hours

Introduction to the field of civil engineering with an overview of transportation infrastructure, municipal water and wastewater systems, surveying and environmental considerations. Other concepts to be introduced include careers in civil engineering, qualifications for civil engineers and technicians, and professional organizations within the industry.

CET 114 Introduction to CAD for Civil Engineering

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours

Familiarization with computer-aided drafting (CAD) systems in the preparation of drawings and schematics for building and civil engineering construction projects. Students will utilize the latest version of AutoCAD software.

CET 120 Introduction to Transportation Design

3 Class Hours 3 Quarter Credit Hours
Prerequisite: CET 110

This course is an introduction to the planning, design and construction of highway, rail, air and marine transportation systems. Maintenance and rehabilitation of existing infrastructure will also be examined. Case studies of actual transportation projects will provide real-world connections to this important industry. Students will explore the future developments of 21st century transportation and its impact upon the civil engineering profession.

CET 124 Construction Fundamentals & Materials

3 Class Hours 3 Quarter Credit Hours
Prerequisite: CET 110

This course is an introduction to civil engineering relative to the assembly and construction of general infrastructure projects and to the extensive terminology and materials used in the industry. This course will present the basic knowledge of materials and methods utilized in construction: metals, masonry, concrete and timber. The information covered in this is the basis for material covered in subsequent courses in Civil Engineering Technology.

CET 128 Civil Documents & Design I

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisites: CET 114, MA 100/110

This course is an introduction to the content and preparation of typical civil documentation. Topics will include drawing organization, basic measurements, equipment, dimensioning and the conversion of raw civil data to a working drawing. Through a series of assigned design problems, students will explore basic concepts of topography, utility placement, property descriptions, plan, elevation, cross section and profiles. An overview of the documents necessary to prepare a construction bid, and the bid process will also be presented.

CET 135 CAD II for Civil Engineering

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: CET 114

This course expands upon the theory and applications of computer-aided drafting and design introduced in CET 114. Topics will include advanced three-dimensional civil engineering computer-aided design (CAD) relative to earthwork, infrastructure and utility design. The emphasis will be on advanced use of AutoCAD Civil by Autodesk and increased productivity techniques.

CET 136 Introduction to Water & Waste Water Design

3 Class Hours 3 Quarter Credit Hours
Prerequisites: CET 124, CET 128

This course introduces students to water resource management and wastewater treatment processes. Additional topics will include stream sanitation, water transportation and distribution systems, water, solid waste management, environmental evaluations, and the design of small water and wastewater systems.

CET 138 Zoning & Land Use Planning

3 Class Hours 3 Quarter Credit Hours
Prerequisites: CET 120, CET 124

This course introduces students to concepts of municipal zoning relative to land use and planning. Additional topics will include history of zoning development in the United States, zoning terminology, applications of zoning and planning, and smart growth technology.

CET 215 Environmental and Sustainable Design

3 Class Hours 3 Quarter Credit Hours
Prerequisites: CET 124, CET 128, MA 210

This course is a comprehensive examination of the environmental impact upon water, air and soils as a result of construction activities. Topics will include an overview of government agencies and associated laws which govern the environmental aspects of construction, focused discussion on sustainable design, green construction, and Leadership in Energy Efficient Design (LEED) principles.

CET 216 Safety in Construction

3 Class Hours 3 Quarter Credit Hours
Prerequisite: CET 124

This course is an introduction to safety within the construction industry and construction methods for conducting operations in close proximity to potential hazards such as electrical and gas lines, railroads, etc. Ensuring the safety of engineering and construction personnel as well as the general public during construction is paramount. Compliance with OSHA regulations and other safety policies will be examined.

CET 217 Surveying I

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisites: MA 125, CET 128

This course is an introduction to the fundamental concepts of the science of planar surveying and its practical application in the fields of architecture, civil engineering and construction. The course will focus on the theory and technique for horizontal and vertical measurement utilizing common surveying equipment used in industry today. Students will also gain proficiency in the collection and conversion of survey data into topographic maps, profiles and property surveys for use in earthwork calculations, utility location, and site development.

CET 221 Estimating for Heavy Construction

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: MA 125, CET 124, CET 128, CET 136

In this course, students will be introduced to methods of analysis and cost estimation for construction of highways, bridges, tunnels, dams, and other engineering works. Topics will include the study of estimating procedures and principles used to determine detailed cost estimates in the construction.

CET 225 Civil Documents & Design II

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisites: CET 128, CET 135, CET 217, MA 125

This course expands upon the theory and applications of civil documentation and design introduced in CET 128. Through a series of assigned civil design problems, students will gain advanced skills in design, engineering, and document preparation. The emphasis will be on advanced use of AutoCAD Civil by Autodesk and increased productivity techniques.

CET 231 Surveying II

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisites: CET 217, MA 125

Students will study advanced topics in surveying including horizontal and vertical curve layout, earthworks, benchmarks, and establishing property boundary and easement locations. Students will also be introduced to laser leveling, utilization of GPS and total stations.

CET 235 Materials Testing and Quality Control

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: MCT 215, CET 124
Co-requisite: MCT 224

Students will study the structure and behavior of civil engineering materials, including steel, aggregate, concrete, masonry, asphalt, wood, and composites. Students will gain a basic understanding of the general physical properties of construction materials. The focus of this course will be the testing of construction materials for standards and quality. Students will also learn how to conduct common quality tests and document the results.

CHEMISTRY (MATH/SCIENCE CORE)

CHM 101 Life Science Chemistry

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisite: MA 100/110 or MA 109

This course provides an introduction to inorganic chemistry and organic chemistry with a focus on life science applications as reflected in the selection of the text. Topics include measurement, units of concentration, the nature of atoms, states of matter, periodicity, bonding, stoichiometry, chemical reactions, thermodynamics and kinetics.

CHM 300 Chemistry I and Lab

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisite: MA 210

Topics covered include atomic structure, the periodic law, and nature of the chemical bond, chemical reactivity, stoichiometry, and acid base reactions.

CRIMINAL JUSTICE

CJ 110 Criminal Justice

4 Class Hours 4 Quarter Credit Hours

This is an introductory criminal justice course focusing on the concepts and organization of the criminal justice system. This course will examine the various components of the criminal justice system and analyze their interactive relationships with each other, giving students a detailed overview of the criminal justice system in the United States.

CJ 112 Corrections

4 Class Hours 4 Quarter Credit Hours

This course will focus on the various correctional components and concepts that have been established in our modern day corrections system. It will expose students to alternative forms of corrections from incarceration to community based and all the alternatives in between. This course will establish the relationship and importance of corrections in the overall criminal justice system.

CJ 114 The Court System

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours

This course teaches the fundamentals of the criminal and civil legal system in America and includes an overview of federal, state and lower courts. It covers the dynamics of courthouse justice, the roles judges, prosecutors, defense attorneys, witnesses, victims and defendants fill, as well as the trial process and sentencing.

CJ 120 Forensics I

4 Class Hours 2 Lab Hours 5 Quarter Credit Hours
Prerequisite: CJ 110

This course focuses on basic police science theories and techniques and introduces students to crime scene investigation and the analysis of physical evidence typically found at crime scenes. The focus is on crime scene management, recognition, documentation, collection, preservation and processing of crime scene evidence. Students will work in an actual forensic laboratory and on a simulated crime scene. The laboratory component will allow students to employ practical application skills of the forensic topics studied. Assignments from this course will be incorporated into the student's portfolio.

CJ 122 Criminal Law

4 Class Hours 2 Lab Hours 5 Quarter Credit Hours
Prerequisite: CJ 110

This course will cover both theory and practical application of the criminal law. Students will examine the elements of crime, elements of proof and other issues related to criminal law in local, state, and federal jurisdictions. Students will be able to apply the elements of criminal law to real life situations and case studies. Assignments from this course will be incorporated into the student's portfolio.

CJ 130 Forensics II/Portfolio Management

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: CJ 120

This course studies police science theories and techniques in greater depth. Students will engage in hands-on application of forensic topics, such as obtaining and analyzing fingerprints and impressions of physical evidence, photography, and crime scene identification in the simulated crime scene. Students will then apply the techniques learned in the forensics topics in the laboratory component of the course. In addition, students will be instructed on portfolio management and requirements and add materials to their Criminal Justice portfolio.

CJ 132 Criminal Procedure

4 Class Hours 2 Lab Hours 5 Quarter Credit Hours
Prerequisite: CJ 122

This course explores the legal doctrines that constitute the core of criminal procedure created by the United States Supreme Court as it interprets the Constitution. Concentration is on the rules developed for such official action as police searches, taking confessions, and the conduct of criminal trials for the protection of suspects' rights. The classic tension between order (the necessary power of government to ensure public safety by processing suspects through the criminal justice system and convicting the guilty) and liberty (the danger of that power to individual freedoms by the arbitrary exercise of governmental power) will be examined. Assignments from this course will be incorporated into the student's portfolio.

CJ 134 Report Writing

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisites: EN 101, CJ 122

This course focuses on developing the student's ability to write brief, accurate and complete reports. The primary goal is to teach effective methods of conveying the facts and circumstances of unusual occurrences through written reports in an objective manner. Assignments from this course will be incorporated into the student's portfolio.

CJ 240 Interviewing & Investigation Techniques

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: CJ 134

Criminal investigation is an inquiry into allegations that a crime has been committed and the circumstances or relationships that are involved. This course deals with the duties and responsibilities of the investigator/detective/patrol officer in the course of an investigation and emphasizes the policies and procedures employed in the investigation of crime, in addition to present-day tools and techniques available for the law enforcement professional. Topics of recent controversy such as stalking, DNA profiling and the media frenzy that surrounds investigations are also covered. Assignments from this course will be incorporated into the student's portfolio.

CJ 241 Introduction to Digital Forensics

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours

This course is an introduction to digital forensics. Topics include: the discussion of various types of computer crime in both the public and private sector; the collection, preservation and investigation of digital evidence; the fundamentals of computer system construction, software and hardware, computer forensics standards and practices; and software ethics. These topics will be reinforced through case studies, hands-on laboratory exercises and video presentations.

CJ 244 Drugs & the Law

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisite: CJ 122

This course will examine drug use in America, as well as the influences from other countries. The course will cover drug use from a broad perspective, including the biological, historical, psychological, and sociological aspects of drug use and abuse in our society. The business of drug dealing, diverse drug laws, prevention activities, and treatment programs will be discussed. This course will also provide students with a thorough understanding of the nation's changing drug policy and the criminal justice system's reaction to those changes. Assignments from this course will be incorporated into the student's portfolio.

CJ 250 Police Operations/Simulated Firearms Skills

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours

This course is designed to instruct students in the history and purposes of policing, as well as the various methods of contemporary police operations, including community policing. In addition, police equipment, support services, personnel issues, and patrol/investigative techniques used within the law enforcement field are covered. Students will be introduced to firearms through a computer simulation experience. The lawful and unlawful use of weapons under current legal controls, and the legal restrictions concerning firearms, as well as liability issues related to the use of firearms will be covered. Thorough training on decision making, involving shoot/don't shoot scenarios, will be covered in the lab sessions, in addition to building searches and motor vehicle stops, handcuffing and baton training. Assignments from this course will be incorporated into the student's portfolio.

CJ 254 Sentencing – Probation and Parole

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisites: CJ 110, CJ 112

This course focuses on the services delivered to the offender, such as probation, parole, halfway houses, drug-alcohol, mental health, and other social services agencies. A focus on community programs, and programs used in restructuring the correctional client within society will also be covered. An examination of offender supervision philosophies within community correction programs, jail and prison reentry programs, parole and probation agencies, and pretrial supervision environments will be explored. Assignments from this course will be incorporated into the student's portfolio.

CJ 256 Portfolio Prep and Management

2 Lab Hours 1 Quarter Credit Hour

This course will assist Criminal Justice students in the creation of a portfolio that will demonstrate academic progression and the acquisition of various criminal justice skills. The portfolio will provide a comprehensive snapshot of the individual learning experience and will evaluate proficiency and ability. It typically includes sample reports, completed assignments, submission and evaluation of evidence and materials gathered in Forensics I and II, case studies, skill evaluations and information to be presented during the Moot Court/Mock Trial segment in Quarter VI.

CJ 258 Contemporary Criminal Justice Issues

3 Class Hours 3 Quarter Credit Hours

This course will explore current events within the criminal justice system utilizing a variety of high-interest issues. Students will be encouraged to discuss and debate recent happenings

to develop an understanding of how these issues relate to crime and justice.

CJ 260 Moot Court/Mock Trial

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: Successful completion of all technical courses in Quarter I through Quarter V

The Moot Court/Mock Trial is the culmination of the Criminal Justice program of study. Students will be assigned roles within the criminal investigation studied throughout the program, such as police officer, forensics investigator, expert witness, probation officer, prosecutor or victim, defense attorney or defendant. Students will prepare and present testimony/evidence/opinion in a life-like criminal trial utilizing the contents of their portfolio to demonstrate the knowledge, experience and skills gained from each course students have completed. The focus will be on the student's ability to organize case materials, properly present convincing testimony/argument, and defend their position/role based on solid legal concepts that have been developed from, and documented in their portfolio.

CJ 262 Internship

1 Class Hour 10 Lab Hours 3 Quarter Credit Hours
Prerequisite: Successful completion of all technical courses in Quarter I through Quarter IV

The optional Internship offers students the opportunity to apply the criminal justice theories learned to practical application in the field. Placement in an appropriate agency is achieved through the approval of the Criminal Justice Department Chair/supervising faculty member. A log of activities and duties performed will be maintained, and the final grade will be based on the log, the assessment provided by the placement agency, and a final comprehensive report detailing the student's experience.

CJ 264 Terrorism – Concepts and Analysis

4 Class Hours 4 Quarter Credit Hours

This course will provide students with an overall snapshot of modern day terrorism. It will explore the post-9/11 strategic methodologies of terrorism and how they relate to law enforcement. This course will expose students to various terrorist tradecraft and identification of both foreign and domestic terrorist organizations. It will allow students at all levels of law enforcement to develop an understanding of their role in combating modern day terrorists. The laboratory component will allow students to research various terrorist organizations, conduct group assignments, and plot future terrorist trends.

CJ 266 Gangs & Organized Crime

4 Class Hours 4 Quarter Credit Hours

This course is designed to familiarize students with the structure and organization of traditional and emerging gangs/organized crime operations. It is an exploration of the history, scope, and methods of controlling organized crime and street gangs in America with emphasis on local, regional, and statewide crime control efforts. Research and discussion of federal and state laws aimed at preventing this type of crime will be undertaken. Investigation techniques will be discussed concerning recognizing gang/organized crime activities, graffiti, symbols, and methods of recruitment of new gang/organized crime members.

CJ 371 Evidence and the Law

4 Class Hours 4 Quarter Credit Hours

This course concentrates on criminal, rather than civil, evidence. The aim of the course is to teach students how to legally obtain evidence, as well as develop the ability to reason about evidence, and encourage them to reflect critically on the ever-changing legal climate. At a more detailed level, we will look at issues such as the standard of proof, asking why the standard of proof in criminal trials is beyond a reasonable doubt and what reasonable doubt means. Students will consider how inferences are drawn from evidence, and how basic ideas of probability can give insights on this process. Examination of how the police gain confessions from suspects and how the law regulates the admissibility of confessions will be reviewed. An important theme of the course relates to questions about what makes a trial fair and whether courts should admit illegally or improperly obtained evidence; it will also ask what the privilege against self-incrimination is and whether it can be justified. The concept of expert evidence will be explored, concentrating on particular examples such as DNA evidence, fingerprint evidence, and modern day mobile forensic evidence.

CJ 372 Case Studies in Criminal Forensics

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisites: CJ 120, CJ 130

This course is designed to explore actual homicide and/or violent crime cases as seen through the eyes of the investigator, using actual crime scene photographs, sketches, photographed evidence and autopsy photographs. A visit to the original outdoor crime scene will be conducted, if possible, with the instructor/investigator on scene for questions. This course will test the knowledge and analytical skills of students and their ability to fully develop the investigative plan needed to move forward in the case analysis. Labs will focus on processing evidence similar to the type seized from the original crime scenes attempting to yield and analyze similar results from the actual cases.

CJ 374 Domestic and Family Law Issues

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours

This course introduces the elements of family law and explores its influence on American social life and contemporary notions of justice. Topics include marriage and parenting implications on the justice system, divorce, custody and support, nontraditional families, and domestic violence. Issues of child abuse and classification of child predators will also be explored.

CJ 380 Criminal Justice and the Media

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisite: EN 331

An in-depth analysis of the effect of the news media on crime levels and public fear of crime. The relationship between media coverage and public perception, as well as the media's role in crime prevention, is explored. Federal and state legislation related to freedom of the press, privacy protection, and freedom of information requests will also be discussed.

CJ 382 Integration of Criminal Law and Criminal Procedure

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: CJ 122, CJ 132

This course will build upon the principles and concepts learned in CJ 122 Criminal Law and CJ 132 Criminal Procedure. Students will examine hypothetical and actual cases and identify the strengths and weaknesses of the matter using principles of both statutory and constitutional analysis. Upon completion of the case reviews, students will be expected to furnish an opinion on the merits of the case and the likelihood of a successful prosecution, or identify the need for additional investigation and evidence to bring the matter to a resolution.

CJ 384 Contemporary Issues in Corrections

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: CJ 112

This course looks at the many complex issues that corrections professionals face in a constantly-changing environment. Topics include: political and social outlooks on corrections, legal liability issues as they pertain to both prisons and jails, use of force, medical needs and rights of prisoners, religious issues, food services, workforce recruitment and retention, administrative and management challenges. Students will use assigned lab time to develop a paper layout and set-up of a small prison/jail, to include addressing construction, security, staffing, emergency protocols and budgeting.

CJ 389 Mobile Device Forensics

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: CJ 241

Students will learn the techniques and methods used in the acquisition and analysis of data from mobile devices, such as cell phones, iPods, iPhones, BlackBerrys and PDAs; SIM cards; the tools and methods used in the forensic investigation and analysis of mobile devices and SIM cards; the preparation and writing of forensic reports and preparing for testimony. Topics include: discussion of cell phone, iPod, iPhone, PDA and BlackBerry basics; SIM cards; report writing of forensic investiga-

tions, preparation of court testimony. These topics will be reinforced through case studies, hands-on laboratory exercises and video presentations.

CJ 393 Advanced Reporting Writing Skills

4 Class Hours 4 Quarter Credit Hours
Prerequisites: CJ 134, EN 331

This is an advanced course emphasizing gathering, organizing, and preparing information for more complex investigative reports. Topics include: communicating facts, information, and ideas effectively in a simple, clear and logical manner for various types of criminal justice system reports, agency memoranda, and administrative reports. Using video scenarios as a basis for the information, students will gain practical experience in field note-taking, report writing and presenting testimony in court-like settings. In addition, students will learn the practical aspects of computer-assisted report writing and the integration of traditional report writing techniques with these types of programs.

CJ 394 Issues of Diversity in Criminal Justice

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: SS 303

This course explores a broad range of populations as they interact with the criminal justice system. Populations studied include: Asian-Americans, gays and lesbians, Latinos, Arab-Americans, Native Americans, and the elderly in addition to the more "traditional" minority groups. Topics include: historical development, societal issues, crime and punishment, discrimination, and employment. Students will examine special populations in various roles throughout the criminal justice system to get a more balanced view of the numerous issues facing these particular groups.

CJ 400 Ethics and the Criminal Justice Professional

3 Class Hours 3 Quarter Credit Hours

This course examines ethical questions that can arise during the career of a criminal justice professional. Students will use analytical tools to recognize and address contemporary ethical dilemmas within the American judicial system. Students will also explore issues of morality, virtue, honesty, and ethical decision-making in the United States criminal justice system. Topics include: behavior on and off duty, leading by example, corruption and using positions for personal gain. This course will incorporate hypothetical situations as well as real cases so that students can evaluate and discuss the reasons a case/ethical dilemma developed and possible avoidance techniques that could/should have been employed.

CJ 402 Use of Force and the Consequences

4 Class Hours 4 Quarter Credit Hours
Prerequisite: CJ 250

This course will expose students to the legally established use of force standards in our justice system. Students will receive a historical and comprehensive review of U.S. State Supreme Court cases that have established the legal standards pertaining to the use of force. Students will also study the use of force continuum and the civil and criminal consequences if violations of the use of force standards occur.

CJ 404 Digital Forensics Investigations and Applications

4 Class Hours 4 Quarter Credit Hours
Prerequisites: CJ 241 and CJ 382 or CYB 371

This course explores the statutes and court procedures associated with the digital forensic investigation for both the criminal and civil systems. Topics include 4th Amendment implications and protocols, as well as law enforcement practices designed to prevent, investigate and prosecute these crimes. In addition, traits of the "typical" computer hacker, virus writer, and cyber terrorist offender will be explored using review of real life examples and case studies.

CJ 410 Advanced Techniques in Criminal Forensics

4 Class Hours 4 Quarter Credit Hours
Prerequisite: CJ 372

This course is designed for students that have a background in basic crime scene investigation and processing. Students will be assisted in achieving a higher level of proficiency in crime scene investigation and upon completion of this course, will have the necessary skills to process or coordinate the processing of complex crime scenes. Building upon the knowledge and skills obtained in CJ 130 Forensics II/Portfolio Management and CJ 372 Case Studies in Criminal Forensics, students will expand upon the shooting reconstruction and blood spatter analysis instructions. Methods of instruction include: analysis of bloodstain spatter using mathematical formulations and stringing to calculate angles of impact spatter to establish points of origin; expanded shooting reconstruction with the use of lasers and mathematical formulations to calculate bullet trajectory to establish shooter/victim position; and detection and enhancement of blood evidence at crime scenes with a focus on chemical processing of bloody latent fingerprints.

CJ 412 Critical Incident Response and Tactics

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: CJ 402

This course is designed to assist students in analyzing the methods and techniques used by law enforcement profes-

sionals as they handle dangerous and stressful situations in a legal, positive manner. This course will present an overview of critical incident management by discussing planning, prevention, response, and post-incident management, as well as inter-agency coordination. Topics include the various types of critical incidents (such as serious accidents, crimes in progress, natural disasters, and terrorist acts), identification and description of the objectives and benefits of a coordinated critical incident response, review of critical incidents and critique of the positive and negative outcomes of critical incident responses. Students will examine critical incident response both pre-9/11 and post-9/11.

CJ 414 Corporate and Private Security

3 Class Hours 3 Quarter Credit Hours

This course looks at the many facets of corporate and private security. Students will examine the historical background of security, as well as an analysis of corporate security methods, advancements in private security technology, camera systems, alarms, and anti-breaching systems. Students will discuss the theory that private security can help be the eyes and ears for law enforcement and if that approach could result in security at less cost to society and the taxpayer.

CJ 416 Capstone Investigation and Preparation

1 Class Hour 2 Lab Hours 2 Quarter Credit Hours
Prerequisite: Successful completion of all technical courses in Quarter VII through Quarter IX

This course will assist Criminal Justice students in preparation for their participation in CJ 424 Senior Capstone. The Capstone Investigation and Preparation class will provide students with the framework necessary to prepare them for the multi-session investigative assignment they will be required to complete in Quarter XII. This learning experience will evaluate proficiency in the skills learned including review of sample reports, completed assignments, submission and evaluation of evidence and review of case studies. All of this will be done with an emphasis on the instructor preparing students for what will take place as they complete their course of study in their final Capstone project/presentation of investigation.

CJ 420 Criminal Justice Administration Issues

3 Class Hours 3 Quarter Credit Hours
Prerequisite: CJ 400

This course will identify, analyze, and offer solutions to various contemporary management problems in a criminal justice organization. Students should be prepared to review case studies related to management problem recognition and review the role of supervisors and managers in a typical criminal justice agency. Students will be exposed to civil liability issues

at the local, state, and federal law levels and learn proactive methods that may minimize personal and organizational liability risks. Constitutional requirements, court decisions, and legislation (such as EEOC requirements) and their impact on management in criminal justice organizations are discussed.

CJ 421 Women and Crime
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 331
This course will focus on women's experiences with crime and the criminal justice system in America. The primary areas of study will be: women as victims, lawbreakers, prisoners, and professionals in the criminal justice system. Students will explore the problems and issues facing women in the criminal justice system and develop an understanding of these issues and their importance.

CJ 424 Senior Capstone
2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: Successful completion of all CJ courses in Quarter VII through Quarter XI
Senior Capstone is the culmination of the Bachelor of Science in Criminal Justice program of study. Students will take part in a multi-session mock crime event and be expected to utilize the skills learned and studied throughout the program as they investigate the event. Students will respond to the mock scene, set up an incident command, and gather evidence and statements. After finishing the on-site investigation, students will analyze evidence in the lab and draft the necessary investigative documents and reports to prepare the case for court. The focus will be on the student's ability to organize and investigate a complex mock crime event and properly present convincing testimony/argument based on the facts they are able to develop during the investigation.

CJ 426 Senior Internship
1 Class Hour 10 Lab Hours 3 Quarter Credit Hours
Prerequisite: Successful completion of all CJ courses in Quarter VII through Quarter XI
The Internship offers students the opportunity to apply the criminal justice theories learned to practical application in the field. Placement in an appropriate agency is achieved through the approval of the Criminal Justice Department Chair/supervising faculty member. A log of activities and duties performed will be maintained, and the final grade will be based on the log, the assessment provided by the placement agency, and a final comprehensive report detailing the student's experience.

CJ 430 Career Preparation for the Criminal Justice Professional
2 Class Hours 2 Quarter Credit Hours
Seeking employment within the field of criminal justice can be challenging for many without prior preparation. This course

will take an in-depth look into written, physical/agility and psychological testing requirements as applicable, interviewing techniques, professional appearance and resume building. A detailed examination of the background investigation process to include social media activity, credit reporting, criminal activity, polygraph use and other investigative tools will also be undertaken.

CLINICAL MEDICAL ASSISTANT

CMA 100 Law and Professionalism in the Medical Office
3 Class Hours 3 Quarter Credit Hours
Law and Professionalism in the Medical Office is designed to introduce the clinical medical assistant to the foundations of medical law that will assist them with interacting with the legal profession, recognizing when they need medical advice, protect their employers from medical malpractice complaints, and understand their employee rights and the rights of their patients. Case studies from actual legal proceedings are used to illustrate key points of law and interpretation of statutes that may affect the professional medical assistant. This introductory course presents the legal side of the outpatient medical environment.

CMA 101 Medical Language I
1 Class Hour 1 Quarter Credit Hour
This introductory course provides students with basic information pertaining to the introduction to medical language, including basic skills, language and basic anatomical terminology.

CMA 121 Medical Language II
3 Class Hours 3 Quarter Credit Hours
Prerequisite: CMA 101 or HS 102
A continued comprehensive study of Medical Language, building upon the foundations presented in CMA 101 Medical Language I. Medical terminology relating to specific body systems will be explored in greater depth and applied in Anatomy & Physiology II.

CMA 126 Clinical Documents and Communications
2 Lab Hours 1 Quarter Credit Hour
This course will introduce students to the patient record, records management and other documents common to the clinical setting. Topics will include the importance of the patient record, initiating and maintaining the medical record, charting formats and accuracy, common medical abbreviations as well as filing equipment and systems. Telephone technology and techniques will also be discussed and applied. This course is geared to actual practice of topics introduced.

CMA 131 Medical Language III
2 Class Hours 2 Quarter Credit Hours
Prerequisite: CMA 121
This course builds on the medical terminology learned in Medical Language II and includes symbols and charting abbreviations, chemical symbols, laboratory test abbreviations and medical terminology of specialty areas of medicine. Students will learn to communicate medical information common to the clinical setting both verbally and through the written word.

CMA 132 Clinical Laboratory Tests
2 Class Hours 2 Quarter Credit Hours
Prerequisites: BIO 100, BIO 120
Co-requisite: BIO 131
Common diagnostic laboratory tests are studied in a system-by-system approach with implications for health care professionals discussed.

CMA 136 Clinical Care Techniques I
2 Class Hours 6 Lab Hours 5 Quarter Credit Hours
Prerequisites: BIO 100, BIO 120
A competency-based introduction to patient centered procedures routinely performed in the medical office. Topics include infection control, patient exams, vital signs, assistive devices, hot and cold application, wound management, and principles of nutrition.

CMA 217 Clinical Care Techniques II
2 Class Hours 6 Lab Hours 5 Quarter Credit Hours
Prerequisites: CMA 132, CMA 136, BIO 131
In this competency-based introduction to exam room procedures in the clinical setting, students will master the basic techniques of eye and ear testing, x-ray preparation, sterile technique, minor surgery preparation and assistance, managing medical emergencies, computerized multichannel diagnostic EKGs and patient education.

CMA 220 The Electronic Medical Record
2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: BIO 100, BIO 120, MGM 112
This is an introductory course that will give an overview of the electronic medical record (EMR). Some of the topics presented will include terminology, prescription/medication including E-Prescribing, standard naming conventions, discrete data fields, as compared to scanning and patient disease registries. The practical hands-on experience in a computer lab setting will provide activities similar to what will be encountered in the workplace setting.

CMA 225 Medication Administration
2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: CMA 136, BIO 100, BIO 120, BIO 131
This course will apply the basic principles of medication prep-

aration and administration, focusing on the knowledge and skills required for safe and effective administration. Emphasis will be placed on legal and ethical implications, source of drugs, drug relations, drug references, drug actions, forms of drugs, labeling, storage, and handling, systems of measurement and dosage calculations. Guidelines for the preparation and administration of medication will also be applied. Upon completion, students should be able to prepare and administer oral, intradermal, subcutaneous, and intramuscular medication using proper techniques.

CMA 227 Clinical Laboratory Applications I

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisites: CMA 136, CMA 217

This competency-based course is designed to assist students to develop the skills necessary to perform routine, point of service laboratory procedures in the clinical setting. Topics will include: laboratory safety, microscope use, urine collection methods and testing including complete urinalysis, microbiological testing, pregnancy testing, Pap smears and PKU testing. Quality assurance methods will also be discussed.

CMA 228 Comprehensive Medical Office Practice I

1 Class Hour 4 Lab Hours 3 Quarter Credit Hours
Prerequisite: CMA 220

An overview of insurance coverage in the United States is presented. The proper, efficient, and accurate completion of the many types of insurance forms is taught. Blue Shield, Medicare, Medicaid, Workers' Compensation and private insurance are taught and practiced. Correct procedure coding using CPT codes is researched. Diagnosis coding for maximal reimbursement utilizing ICD codes is perfected. Multiple exercises are included to allow students to exercise newly acquired skills.

CMA 229 Comprehensive Medical Office Practice II

1 Class Hour 4 Lab Hours 3 Quarter Credit Hours
Prerequisite: CMA 228

This course is designed to familiarize students with computerized managed care of a medical environment and to assist them in developing the confidence and skills necessary to become a successful user of managed care software. It includes an understanding of managed care and how it operates, managed care contracts, a hands-on simulation of office procedures such as making and rescheduling appointments, entering procedure charges, and posting payments from varied sources. Practice exercises will be provided throughout the course in order to afford students the opportunity to apply learned concepts. Upon completion, students are able to perform computerized management duties as entry-level practitioners.

CMA 236 Clinical Experience I

1 Class Hour 9 Field Hours 4 Quarter Credit Hours
Prerequisites: BIO 100, BIO 120, BIO 131, CMA 100, CMA 101, CMA 121, CMA 126, CMA 131, CMA 132, CMA 136, CMA 217, CMA 220, CMA 225, HS 201, MGM 112, EN 101, EN 102, MA 100/110, PS 201

Preparation for the Clinical Experience begins with an in-class overview of the entire experience. Students will be guided through the completion of job-seeking documents to include the resume, reference list, cover letter, and thank you letter. Selection of site by students, according to personal interests, is supported and completion of necessary documents and contracts are done in conjunction with the chosen site and the department chair. Students will use the administrative and clinical skills acquired through the program to work as an entry-level professional clinical medical assistant in an urgent care setting, hospital, clinic, laboratory, or physician's office. Students will complete 90 hours at the site and be independently evaluated as well as perform daily self-evaluation.

CMA 237 Clinical Laboratory Applications II

2 Class Hours 6 Lab Hours 5 Quarter Credit Hours
Prerequisites: BIO 100, BIO 120, BIO 131, CMA 100, CMA 101, CMA 121, CMA 126, CMA 131, CMA 132, CMA 136, CMA 217, CMA 220, CMA 225, HS 201, MGM 112, EN 101, EN 102, MA 100/110, PS 201

This competency-based course is designed to assist students in developing the skills necessary to perform routine, point -of-service laboratory procedures in the clinical environment. Topics will include: laboratory safety, microscope use, blood collection methods including peripheral blood sampling and phlebotomy, pertinent immunology, hematology and blood chemistry tests. Included are correlated theory and supervised laboratory practice. Quality assurance methods will also be discussed. A comprehensive review is included to prepare students to sit for the National Certification Exam for Medical Assistants.

CMA 240 Clinical Experience II & Clinical Project

1 Class Hour 11 Field Hours 5 Quarter Credit Hours
Prerequisites: BIO 100, BIO 120, BIO 131, CMA 100, CMA 101, CMA 121, CMA 126, CMA 131, CMA 132, CMA 136, CMA 217, CMA 220, CMA 225, HS 201, MGM 112, PS 201, EN 102, MA 100/110

This course is a continuation of CMA 236, Clinical Experience I. Students complete an additional 90 hours of more complex experience at the chosen site, complete a midpoint evaluation and final evaluation of the clinical experience as well as self-assessments. Students will communicate daily clinical experiences through various media, including both written and elec-

tronic methods. Candidates for this course will be expected to be at or near completion of the Associate Degree.

CONSTRUCTION MANAGEMENT

CMT 313 Introduction to Construction Management

3 Class Hours 3 Quarter Credit Hours
Prerequisites: ABT 138, (ABT 232 or MCT 224)

This course introduces students to the field of construction management relative to construction contracting and the construction industry. Topics will include fundamental relationships between construction costs, resources, scheduling, the concept of scope of work, careers in construction management, qualifications for professional construction managers, and professional organizations within the industry.

CMT 329 Revit for Construction Managers

3 Class Hours 3 Quarter Credit Hours

This course introduces computer-aided parametric building information modeling as a tool used in the construction industry. The primary software product used in this course will be Revit by Autodesk. Topics will include basic program operation and application to building information modeling (BIM).

CMT 331 Specifications & Quality Control

3 Class Hours 3 Quarter Credit Hours
Prerequisites: CMT 313, ABT 314

In this course, students will continue their study of construction project specifications relative to contract delivery and quality requirements. Students will perform case studies of construction contracts, examine accepted formats and requirements for specifications, and study the legal, social and financial ramifications of adherence to contract specifications. Additional topics will include field monitoring, enforcement and modification of specifications and the resulting impact upon the construction management process.

CMT 411 Project Scheduling

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisite: CMT 313

This course exposes students to the fundamentals of project scheduling. Topics will include project diagramming, activities and activity relationships, critical path, WBS, and formal schedule preparation using state-of-the-art computer scheduling software. Class projects will include developing and preparing schedules for architectural and/or civil engineering projects.

CMT 412 Construction Practice

3 Class Hours 3 Quarter Credit Hours
Prerequisite: CMT 313

This course explores business and construction practices related to the management of a construction company. Topics will range from perspectives on the financial and operational side of a construction firm to the management of personnel and customer satisfaction. Students will study the organizational structure of a construction company and focus on the roles and responsibilities of individuals throughout the business. Physical assets of a construction company, both in the field and office, will be introduced. Students will gain an understanding of typical contract administration correspondence including progress reports, meeting minutes, letters of record, change orders and letters of acceptance. The procedure for conducting a field visit, project meeting and public workshop will also be covered.

CMT 415 Construction Estimating II

3 Class Hours 3 Quarter Credit Hours
Prerequisite: ABT 127 or CR 136

This course expands upon the theory, applications, and technology studied in ABT 127. Topics will include the use of general conditions, bonding costs, material take-off methods, subcontractor costs, CSI format, overhead, and profit. The primary reference tool will be the R.S. Means CostWorks book.

CMT 422 Construction Site Safety

3 Class Hours 3 Quarter Credit Hours
Prerequisite: CMT 313

This course will examine safety within the construction industry and construction methods for conducting operations in close proximity to potential hazards such as electrical and gas lines, and railroads. Compliance with OSHA regulations and other safety policies will be examined. Methods to establish safety committees and organizational safety goals, objectives and performance measures are covered through class exercises. Lectures include presentations by safety experts and officials from both the public and private sector.

CMT 423 Construction Estimating III

3 Class Hours 3 Quarter Credit Hours
Prerequisite: CMT 415

This course expands upon the theory, applications, and technology studied in CM 415. Topics will include material take-off methods including site work, structures, exterior enclosure systems, and interior finishes. Associated subcontractor costs, and overhead and profit will also be discussed. Computerize estimating will be introduced including database development, take-off methods, labor and equipment quantities, estimate structure, and the relationship of the estimate to the project schedule. Methods of electronic report output will also

be introduced. The primary reference tool for computerized estimating will be Sage Estimating software.

CMT 434 Ethics and the Construction Industry

3 Class Hours 3 Quarter Credit Hours

In this course, students will examine and formalize the concepts of ethical practices within the construction industry. In both the classroom, team, and roundtable settings, students will analyze and discuss case ethical concepts, corruption case studies, and the long-term impact to society when illegal activities occur in a profession which has a direct impact on our everyday world. The course will also facilitate presentations by government and private sector officials in a seminar format.

CMT 435 Senior Thesis

2 Class Hours 6 Lab Hours 5 Quarter Credit Hours
Prerequisites: CMT 411, CMT 422, CMT 423, ABT 315, ABT 325, ABT 328, ABT 331, ABT 334, ABT 338, ABT 423

This is a direct studies course in which students must demonstrate to the architectural and construction faculty, their understanding of and ability to utilize and synthesize the technical and engineering concepts they have developed throughout their college experience. In CMT 435, students will submit, in proposal format, a project for review and approval by the faculty. Students will work independently with periodic interaction with a faculty member. The term will culminate with a formal presentation to a jury of faculty and critics.

BUILDING CONSTRUCTION

CR 114 Technical Fundamentals of Building Construction

5 Class Hours 5 Quarter Credit Hours

The basic procedures involved in estimating materials, costs, and critical measurements are studied. Basic construction math and its applications are introduced.

CR 116 Tool and Site Work Lab

8 Lab Hours 2 Quarter Credit Hours

Selected projects are built in the lab with emphasis on safety and proper tool usage. Transit work is performed and its use in the building trade is demonstrated.

CR 117 Introduction to Blueprint Reading

2 Class Hours 2 Quarter Credit Hours

This course is designed to introduce students to architectural blueprints. Types of prints, symbols, dimensions, and lines will be discussed.

CR 121 House Framing I Lab

6 Lab Hours 2 Quarter Credit Hours
Prerequisites: CR 114, CR 116

Full-size interior treatments are covered. Exercises include drywall work, molding installation and window casing. Stair and rafter layouts are practiced for various construction applications.

CR 122 House Framing I

5 Class Hours 5 Quarter Credit Hours
Prerequisites: CR 114, CR 116

Standard framing procedures, wall construction, headers, center beams, floor and ceiling joists, stairs, and common rafters are studied. Blueprint reading and takeoffs resulting in accurate material estimates are emphasized. Sustainable construction methods and materials are emphasized.

CR 124 Construction Safety Practices and OSHA

1 Class Hour 1 Quarter Credit Hour

This course is designed to stress the importance of developing and practicing safe work habits associated with the construction and cabinetmaking industries. Occupational Safety and Health Administration (OSHA) regulations that apply to the building industry will be examined in depth.

CR 126 Introduction to Building Codes

2 Class Hours 2 Quarter Credit Hours

This course is designed to introduce students to the One- and Two-Family Dwelling Code. Comparisons between Rhode Island, Massachusetts and other states will be discussed.

CR 131 House Framing II

4 Class Hours 4 Quarter Credit Hours
Prerequisites: CR 121, CR 122

Varied structural problems involved in custom houses are presented. Structural designs and layouts are done from basic prints for a house. Particular attention is paid to proper sizing of structural members and beams for support. Cost estimates of alternate methods are done for comparison. Insulation, exterior and interior treatments are also presented. Sustainable construction methods and materials are emphasized.

CR 132 House Framing II Lab

6 Lab Hours 2 Quarter Credit Hours
Prerequisites: CR 121, CR 122

A structure, approximately 8'x10', is built. The building includes roofing, siding, and trim work. Work on a job site may be substituted if appropriate. Sustainable construction methods and materials are emphasized.

CR 136 Introduction to Computer Estimating

3 Class Hours 3 Quarter Credit Hours
Prerequisites: CR 121, CR 122 (may be waived with appropriate experience)
Students will study basic computer estimating techniques and develop detailed construction cost estimates from blueprints and/or specifications using the designated software.

CR 209 Introduction to Computer-Aided Design (CAD) for Construction

4 Class Hours 4 Quarter Credit Hours
Prerequisites: CR 121, CR 122
This is an entry-level theory and lab course introducing students to the basics of computer-aided design. Sustainable construction methods and materials are emphasized.

CR 210 Lead-Safe Remodeler/Renovator Training

2 Class Hours 2 Quarter Credit Hours
This 20-hour class will train students to comply with the RRP requirements for both the EPA and the State of Rhode Island. The class covers all of the lead safe work practices required for both interior and exterior renovations on pre-1978 buildings that have not been certified as lead free. After the successful completion of the class, students will be eligible for an RRP license.

CR 211 Cabinetmaking I Lab

6 Lab Hours 2 Quarter Credit Hours
Operations are performed and a project built that involves numerous cabinetmaking joints and assembly procedures. Emphasis is placed on the safe operation and set-up of basic cabinetmaking equipment. Scale drawings are made of selected projects.

CR 212 Cabinetmaking I

4 Class Hours 4 Quarter Credit Hours
Cabinetmaking I discusses the properties of wood, elements of joinery, gluing and clamping, and machining methods. As theory is presented, operations are performed and projects are built by students to incorporate classroom work into actual practice.

CR 217 Professional Seminar

1 Class Hour 1 Quarter Credit Hour
This course will prepare students to participate in the Internship component of the Building Construction Technology Program. It will benefit all students who are seeking employment upon graduation. The course will include resume preparation, interviewing skills research, job research, and (for those entering internships) documentation of contacts to potential employers to procure a position. Students are responsible for securing their own internship sites. This course is mandatory for all students taking internships and is an option for night students who take labs in lieu of internships.

CR 222 Introduction to Computerized Numerical Control (CNC) Programming

3 Class Hours 3 Quarter Credit Hours
This is an entry-level course to familiarize students with Computerized Numerical Control processes and operations. Set up, operation, and principles of CNC techniques, principally routing, will be discussed and demonstrated.

CR 223 Introduction to Computerized Numerical Control (CNC) Lab

2 Lab Hours 1 Quarter Credit Hour
In a laboratory situation, students demonstrate the set-up, operation and principles learned in CR 222.

CR 226 Sustainable Design and Construction Methods

3 Class Hours 3 Quarter Credit Hours
This class will introduce students to the design, practices and methods of sustainable building. Using the National Green Building Standard, ICC700, students will learn to design to bronze, silver, gold and emerald levels of sustainable design. Various methods of construction choices will be discussed using the 'what if' concept to determine the result of each choice made and how it impacts other design choices.

CR 230 Cabinetmaking II

4 Class Hours 4 Quarter Credit Hours
Prerequisites: CR 211, CR 212
Routers and templates, veneering, frame, and panel construction are studied and incorporated in projects. Creating a bill of materials and cut list will also be discussed. Scale drawings are made of selected projects.

CR 231 Cabinetmaking II Lab

8 Lab Hours 4 Quarter Credit Hours
Prerequisites: CR 211, CR 212
Projects are built in the lab using prints drawn or prints studied in the classroom. Projects are designed to implement principles, practices, and theory taught in CR 222 and reinforces material from CR 212 and CR 211.

CR 236 Introduction to Finishing and Spraying

2 Class Hours 3 Lab Hours 3 Quarter Credit Hours
Students are introduced to the principles and practices of spray finishes. Both HVLP and conventional HP spray techniques will be used. Both lacquer and water-based products will be studied. Mixing proportions and colors will be discussed as well as the variety of clear finishes available. Students will spray projects built throughout the cabinetmaking curriculum.

CR 237 Cabinetmaking III

4 Class Hours 4 Quarter Credit Hours
Prerequisite: CR 230
Radius work, compound angles, and dovetails are studied and incorporated in projects to be built. Factory built kitchen cabinets are discussed and plans are drawn for different kitchen layouts.

CR 238 Cabinetmaking III Lab

8 Lab Hours 2 Quarter Credit Hours
Prerequisites: CR 230, CR 231
Advanced projects are built in the lab using prints drawn or supplied in the classroom. Operations studied in all related courses, including CNC if desired, are incorporated in lab assignments.

CR 242 Kitchen and Bath Design and Installation

2 Class Hours 2 Quarter Credit Hours
This class will introduce students to accepted kitchen and bath design from a conceptual, practical and building code perspective. Students will use software to design kitchens and baths using the industry's premier software.

CR 243 Kitchen and Bath Design and Installation Lab

3 Lab Hours 1 Quarter Credit Hour
In the lab course that accompanies CR 242, students will learn various installation techniques whether for new construction or remodeling.

CR 250 Internship I

15 Field Hours 3 Quarter Credit Hours
Students will gain hands-on experience working with an employer under an approved Internship agreement.

CR 254 Internship II

15 Field Hours 3 Quarter Credit Hours
Students will gain hands-on experience working with an employer under an approved Internship agreement.

CYBER SECURITY

CYB 371 Digital Forensics

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: NE 267
In this course, students will learn the techniques related to the collection and analysis of digital data to track user and intruder activity that could possibly be used in a civil or criminal proceeding. Students will use industry-leading software and hardware to properly collect and preserve evidence using sound forensic techniques. Acquisition and analysis of evidence that can be obtained from servers, workstations and laptops is emphasized.

CYB 373 Penetration Testing

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: NE 267

In this course, students will learn how to properly use techniques employed by professional penetration testers to validate information assurance. In addition to validation techniques, students will learn anti-hacking techniques, network reconnaissance tools, buffer overflows, password cracking and other concepts related to testing and validating network defenses.

CYB 392 Mobile Forensics

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: CYB 371

In this course, students will use industry-leading hardware and software to preserve and acquire digital evidence from mobile devices for possible use in civil or criminal proceedings. Proper forensic methodology related to working with cell phones, tablets and other mobile devices are emphasized.

CYB 394 Windows Security

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: NE 381

Students will learn how to secure and troubleshoot a Microsoft Windows-based Active Directory network environment through an integrated system of skill-building lessons, hands-on exercises, and self-assessment tools.

CYB 408 Linux Security

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: NE 402

This course builds on the Linux System Administration course, reacquainting students with administrative concepts and presenting security methodologies as they relate to Linux. It will present logical concepts and provide practical applications related to Linux and the applications and methodologies utilized to secure it. We will discuss notable hacks, hardening topics and IP Tables, which is an internal firewall feature-set within Linux. Also, the course will present methods for securing both file and file system. Upon completion of the course, students will have an understanding of Linux subsystems and their relationship to security through successful completion of the following labs: building both a Linux workstation and server; navigating the Linux file system; checking for rootkits; server block encryption; securing Apache; configuring IP Tables (Linux Firewall); and hardening the OS.

CYB 409 Web Application Security

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: NE 395

Students in this course will learn common security pitfalls in web applications as well as how to avoid them. Topics include use of encryption, spoofing, phishing, session management, secure data storage and other techniques related to ensuring the protection of the application and customer data.

CYB 410 Introduction to Senior Project

3 Class Hours 3 Quarter Credit Hours
Prerequisites: CYB 394, NE 406

Students will work together in groups to create a proposal for the design of a highly secure network system for a given case scenario. The groups will use critical thinking skills to select appropriate technologies for specific functional requirements. Each group will be required to meet certain documentation process points as well as do a final proposal presentation.

CYB 412 Network Security

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: NE 406

In this course, students will learn the fundamentals and skills related to network security. Topics such as IPSec, Network Access Control, network asset vulnerabilities, encryption techniques used on the Internet, security certificates, phishing, spoofing, browser configuration, network perimeter security and wireless network security are covered.

CYB 423 Incident Response

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: NE 267, CYB 394

Students will learn how to use forensic techniques in order to investigate and document system and network intrusions as well as malicious software incidents. System restoration techniques are also covered. Students will become adept at investigating advanced persistent threats, rogue employees, remote data breeches and other security violations.

CYB 424 Senior Project

6 Lab Hours 3 Quarter Credit Hours
Prerequisites: CYB 410, CYB 412

Students will configure, test and analyze a complex, real-world security topology based on a given scenario in a group setting. Students will be required to draw upon knowledge introduced in all of the previous courses, provide documentation at various progress points and make a final presentation.

DIGITAL MEDIA PRODUCTION

DMP 101 Video Techniques/Studio 1

2 Class Hours 6 Lab Hours 5 Quarter Credit Hours
Co-requisite: DMP 118

Students are introduced to shooting, editing, studio, lighting, and sound principles. A live studio project introduces all roles of studio production and team-building skills. Students write, produce and edit a one-minute montage on a digital edit system and learn the basic skills needed to edit on an analog system.

DMP 105 Visual Design

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Co-requisite: DMP 101

Students learn fundamental design principles that apply to all visual art, enabling them to create visuals/graphics that fulfill specified communications requirements. The application of these principles of design will be demonstrated through the analysis of an array of media and by incorporating them in assigned lab projects.

DMP 106 Motion Graphics

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: DMP 105

Eye-catching animated graphics are a growing trend in broadcast and non-broadcast television. Motion Graphics will introduce students to motion design aesthetics and professional animation software programs. This course will focus on designing for specific elements used in video projects — logo, titles, IDs, informational graphics, and symbolic images.

DMP 118 Scriptwriting

2 Class Hours 2 Quarter Credit Hours
Co-requisite: DMP 101

Various script format styles for video production are analyzed. Students prepare scripts for the DMP 101 projects.

DMP 125 Digital Editing

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: DMP 101
Co-requisite: DMP 127 by section

Students will analyze the principles of continuity editing and become familiar with the special functions found in non-linear editing through assigned tutorials. Students will edit the projects shot in DMP 127, focusing on techniques to speed editing while practicing pacing and storytelling.

DMP 127 Field Shooting/Lighting

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: DMP 101
Co-requisite: DMP 125

In this course, students will discuss the elements that make for a visually informative and eye-catching field camera style. Students will learn to shoot to edit; plan for well-composed shots; light for on-the-run shooting as well as more controlled situations. Focus will also include recording good audio in the field, both for interviews and natural sound. Students will understand the variety of shooting styles and script formats for ENG and EFP productions. Projects include shooting a continuity project and an EFP or ENG news story. Both of these projects will include storyboarding the concept.

DMP 134 Studio Production

2 Class Hours 6 Lab Hours 5 Quarter Credit Hours
Prerequisite: DMP 101

Building on the basic studio skills learned in DMP 101, students learn about the elements of pre-production involved in live studio work, the technical jobs required to carry out a live production, and the responsibilities of the producer and director. Studio lighting approaches such as 3-point lighting, chroma-key, use of gels, high and low key lighting using the studio lighting grid are discussed. Use of the waveform monitor and vectorscope will be introduced. Students will carry out two studio productions – a talk show and a commercial or PSA. Preparing a script, lighting plot as well as planning for other pre-production elements such as graphics and audio will be covered. Each student will experience the role of the director by directing his/her own talk show as well as participating as a crewmember for other students' productions.

DMP 136 Audio Recording 1

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours

Audio recording capabilities are a critical skill in the video/radio business and audio/music industry. Students will learn audio recording techniques, microphone specifications, selection and placement as well as the basics of audio engineering. Students learn the basics of Pro-Tools, a digital audio program, using this program to produce their own commercial.

DMP 146 Audio Recording 2

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: DMP 136

The concepts of multi-track recording are studied and implemented on-location and in-studio. The use of mixers, mics, and audio processing effects will be examined. Students will record and mix a simple music track and add sound effects to an existing movie. Using Pro-Tools, students will edit man-on-the-street interviews.

DMP 211 Media Ethics

3 Class Hours 3 Quarter Credit Hours

This course is a critical thinking class about ethical issues in the mass media. The media landscape is constantly changing and students must understand the ethical issues that still face practitioners daily. Students will present research findings on assigned topics.

DMP 215 Corporate Media

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisites: DMP 118, DMP 125, DMP 127

How to take a project from development to execution to evaluation is the objective of this course. Different styles of production will be examined for promotional, educational, and motivational videos. Two productions will be completed based on the approaches discussed in the lecture. Scripting and story-boarding for the projects is a critical factor. Using the shooting and editing skills learned in Quarter II, students will practice making informative and convincing media.

DMP 217 From Pre to Post

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: DMP 118, DMP 125, DMP 127

This course allows students to refine their scriptwriting and formatting skills, while further focusing their pre-production efforts through budgeting and scheduling. With particular emphasis on production value, students will be assigned a short video project, where they will learn how to record using Digital Single Lens Reflex (DSLR) cameras. New post-production software, Final Cut Pro X, will be introduced, where students will edit their projects and practice various methods of media compression.

DMP 227 Radio 1 – Programming

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: DMP 136

Programming aspects of the radio industry will be discussed. Students will create, write, and produce a one-hour weekly radio show. Programs will be recorded and evaluated. Students will also execute a format clock.

DMP 231 Digital Filmmaking

3 Class Hours 6 Lab Hours 6 Quarter Credit Hours
Prerequisite: DMP 215

Examples of personal approaches to storytelling will be analyzed. Elements like story structure, visual and sound style, thematic transitions, and edit pacing are all a part of the narrative style of film. The digital medium is fast becoming a useful tool for visual storytellers whether videographers or filmmakers because of cost, speed and avenues of distribution like the web. Students will become adept at the use of digital effects and apply video post-production tools such animation, layering, and compositing. Students will plan and produce a digital "film" that demonstrates their ability to tell a story and prepare it for presentation in a studio-produced magazine-style show.

DMP 232 Associate Final Project

1 Class Hour 4 Lab Hours 3 Quarter Credit Hours
Prerequisites: DMP 146, DMP 231

A video or audio program is produced that exhibits students' abilities in developing a project from concept to completion. A detailed proposal for the project must be submitted for approval to a designated faculty member.

DMP 237 Radio 2 – Talk and Information

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: DMP 227

In this course, students will work on a team and produce, host, and board operate a radio talk show. Students will produce a remote audio production to incorporate into their shows. Lecture material will cover how to program and develop an interview program for radio. Selected shows will be aired on the on-campus radio station WNET.

DMP 240 Internship

1 Class Hour 10 Lab Hours 3 Quarter Credit Hours
Prerequisites: DMP 134, DMP 136, DMP 215

Students receive credit for practical work experience in the field with a commercial (or equivalent) company. Students must make a written application to the department chair with selection based on academic achievement, attendance, and defined job skill requirements.

DMP 250 Associate Portfolio

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: DMP 231

This is a career-planning course that reviews the essentials of resume creation, resume reel production, interview, and job-hunting skills for the media field. Students will design a resume reel.

DMP 302 Introduction to Digital Audio (5 weeks)

1 Class Hour 2 Lab Hours 2 Quarter Credit Hours

FOR GRADUATES OF THE GMW AS PROGRAM: DMP 302 is a five-week course that introduces GMW graduates to the terminology, processing techniques, and software associated with digital audio production. Students will use Pro Tools on digital audio workstations introduced in the DMP associate-level program and continued in the DMP bachelor-level program. This course, coupled with their other 5-week, Quarter VII course, DMP 328 Music Recording Techniques, allows GMW AS graduates to move seamlessly into DMP Quarter VII, to begin their Multi-Track Recording Project.

DMP 305 Digital Editing 2

1 Class Hour 4 Lab Hours 3 Quarter Credit Hours

In this course, students learn the operation of the AVID nonlinear editing system through the use of tutorials and by editing a short project. AVID is a primary editing tool used in broadcast television.

DMP 307 Visual Design 2

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours

Students learn advanced visual design principles that apply to video graphics design. These principles will be applied to the creation of typical informational video graphics such as charts, graphs, and maps. Students will also be expected to assimilate the principles presented in the course to further enhance the compositional quality of their videography.

DMP 321 Digital Production Techniques

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours

FOR GRADUATES OF THE GMW AS PROGRAM: This course is for GMW graduates entering the bachelor's DMP program who may not be familiar with all the concepts and practices involved in video production. Students will learn about pre-production and production techniques, as well as the personnel and equipment involved in making any kind of video project. Students will write a project proposal, objectives, script, and storyboard as well as produce their concept from shooting through to editing.

DMP 325 Remote Radio Production (5 weeks)

1 Class Hour 2 Lab Hours 2 Quarter Credit Hours

In this five-week course, students will use portable audio digital recorders in field and create radio-style documentaries. Students will write, produce, record, and edit interviews, natural sound, music, and voice over and create a short radio documentary.

DMP 328 Music Recording Techniques (5 weeks)

1 Class Hour 2 Lab Hours 2 Quarter Credit Hours
Prerequisite: DMP 146 for DMP students
Co-requisite: DMP 302 for GMW students

Additional exploration of music production is provided in DMP 328, intended to offer students more practice in the selection and placement of microphones, as well as session setup and editing techniques as they relate to music recording. This additional experience is required to better prepare students for DMP 336, where they will begin their music video project.

DMP 331 News Production

1 Class Hour 4 Lab Hours 3 Quarter Credit Hours

This course covers all essential areas of television news reporting including story planning and development, script preparation, writing for television news, field production techniques, visual storytelling, videography, editing theory, field reporting and interviewing, as well as newsroom terminology. Students learn how to produce, direct, and block a studio news program.

DMP 336 Multi-Track Recording

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: DMP 328

This course examines the functional design and operation of professional studio equipment used in the recording of multi-track masters. Students will explore a variety of recording situations using digital recorders, computer systems, and signal processing equipment.

DMP 337 Sound Reinforcement 1

1 Class Hour 4 Lab Hours 3 Quarter Credit Hours

An introduction to the principles of sound reinforcement provided in clubs, theaters, and concert halls. Students will be introduced to the equipment and techniques used during a live performance at a venue.

DMP 338 Broadcast Pre-Production (5 weeks)

2 Class Hours 2 Quarter Credit Hours
Co-requisite: DMP 336

In this five-week course, students will formulate concepts for producing a music video from which a proposal, production schedule, budget, and storyboard will be developed. Students will base their concepts on the music recorded in DMP 336 Multi-Track Recording. Students will then present their concepts to the class and produce the music video the following quarter in DMP 421 Video Post-Production.

DMP 357 Field Audio Production

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours

This course presents the theory, hardware, and techniques used for field audio recording (in-camera) for video/television. Students will learn about the differences between studio and location recording, the equipment used, and techniques for producing optimum sound in the field. Emphasis will be placed upon the use of portable audio mixers and peripheral gear. Skill will be developed at using the equipment under diverse conditions and interfacing with a variety of field production devices.

DMP 380 Visual Effects

1 Class Hour 4 Lab Hours 3 Quarter Credit Hours

Students will study and create multi-layered visual effects as well as practice advanced animation techniques. They will acquire skills that will enable them to produce more sophisticated effects work in future quarters.

DMP 401 Documentary Filmmaking

3 Class Hours 4 Lab Hour 5 Quarter Credit Hours
Prerequisite: DMP 357

In this course, students will produce a 3-5 minute mini-documentary based on a project proposal and budget. The structure of documentaries will be analyzed by watching a variety of different documentary styles. Students will read about people currently working in the documentary field to better understand current production issues.

DMP 402 Freelance Project Pre-Production

3 Class Hours 3 Quarter Credit Hours
Prerequisites: DMP 447, DMP 423

In preparation for DMP 455 Freelance Production, students will secure an outside client in need of a video program. A detailed program proposal will be developed along with a production schedule, budget, and script.

DMP 406 The Business of Music and Radio Station Management

2 Class Hours 2 Quarter Credit Hours

This course will take students through the management structure of the radio and music industries. Topics will include radio station music management, voice tracking, station imaging, on air promotion, podcasts, blogs as well as copyright and legal issues in the music business.

DMP 410 Sound for Picture

1 Class Hour 2 Lab Hours 2 Quarter Credit Hours

This course is an in-depth look at sound design for motion picture and digital video. Topics include postproduction editing and dialogue replacement, sound effects including Foley effects, processing, and surround sound mixing.

DMP 416 Production Practicum

1 Class Hour 4 Lab Hours 3 Quarter Credit Hours
Prerequisite: DMP 402, Permission of Department Chair

This course requires students to act as freelancers by having them find an outside client in need of a video program. Pre-production tasks will include producing the program's treatment, budget, production schedule, and script. During the production and post-production phase, students are expected to make use of the full complement of audio, graphic, and video workstations available in the department to demonstrate their ability in producing a program that satisfies the client's program objectives and production expectations.

DMP 421 Video Post-Production

4 Lab Hours 2 Quarter Credit Hours
Prerequisite: DMP 338

In this course, students will edit their music video, concentrating on editing style, structure, and pacing. Students will be expected to make use of compositing techniques available in non-linear editing programs. Based on planning and production in the previous quarter, students will spend their time editing and then refining their edit for final presentation.

DMP 423 Advertising

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours

Students will view and analyze print, television, and radio advertising and discuss the creative and strategic thinking behind the advertising. This course will examine advertising strategies and what makes an advertising campaign effective. A brief history of advertising will also be covered in this course. During the lab, students will develop an advertising campaign (print/www, television and radio commercials) for an assigned product that is based on the advertising strategies discussed in lecture. Working in small groups, students

will create two different campaigns for the assigned product and then "pitch" the two campaigns to the "client." After the presentation, one of the two campaigns will be selected by the "client" to be produced in DMP 426 Commercial Production.

DMP 426 Commercial Production

1 Class Hour 2 Lab Hours 2 Quarter Credit Hours
Prerequisite: DMP 423

Students will produce the print/internet, television, and radio commercials from the selected advertising campaign(s) presented in DMP 423. Following the production, students will present the finished campaign to the "client."

DMP 431 Remote Production

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours

Using portable digital recording equipment, students will plan and technically organize a remote location field shoot. The shoot will utilize three cameras and multiple audio inputs to record a live event direct to a hard drive. Students will learn set-up and techniques particular to field production.

DMP 440 Career Preparation

2 Class Hours 2 Quarter Credit Hours

Various aspects of the interview process will be examined in order to better prepare students for this critical first-step in securing a career in the digital recording arts field. Common testing procedures, along with verbal and nonverbal interviewing techniques, will be studied. Students will also be given the opportunity to select several discussion topics that address their particular employment concerns.

DMP 445 Sound Reinforcement 2

1 Class Hour 4 Lab Hours 3 Quarter Credit Hours
Prerequisite: DMP 337

In this hands-on follow-up to Sound Reinforcement 1, students practice setup and mixing of live ensembles. Topics include commonly encountered technical problems and an investigation of equipment and techniques used to overcome them. Instruction includes effective interaction with talent, managers, and venue personnel.

DMP 447 Audio Post-Production

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: DMP 336

This course focuses on the mixdown process as it applies to multi-track recordings used in the audio, music, and film industries. Students will prepare fully-mixed master recordings through the functional use of modern studio technology, from conceptual understanding of spectral and spatial balancing, to the application of equalizers, compressors, limiters, and effects processors.

DMP 449 Mixdown

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: DMP 447

In this course, students will continue to explore and practice the mixdown process. Special emphasis is placed on critical listening and aesthetic considerations. Topics covered include common DAW procedures and data management, use of a virtual console, use of a control surface, signal flow, and digital signal processing. Weekly studio lab time consists of mixing prerecorded multi-track material.

DMP 451 Digital Portfolio

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours

In this course, students will prepare a resume and a portfolio demonstrating highlights from their productions. Special attention will be paid to selecting, refining, and tailoring portfolios for a variety of job opportunities.

DMP 455 Freelance Production

6 Lab Hours 3 Quarter Credit Hours
Prerequisite: DMP 402

Students in Freelance Production will combine all their previous experience and knowledge of video, audio, and graphic production into the creation of a video program for an outside client identified in DMP 402. By using the full complement of equipment and software available in the department, students will demonstrate their ability in producing a program that satisfies a client's objectives, while measuring their progress against the production schedule and budget developed in DMP 402.

ECONOMICS (SOCIAL SCIENCES CORE)

EC 203 Principles of Economics

4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 102

Introduces the fundamental principles of microeconomics and macroeconomics, such as scarcity, supply and demand, growth, fiscal and monetary policies, and the public and the private sectors.

EC 301 The Global Economy

4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 331 or its equivalent

This course is an exploration of the increasingly complex global economy with particular attention to the competing political economies of Europe, the United States, and the Pacific Rim.

EC 321 Healthcare Economics Dilemmas

4 Class Hours 4 Quarters Credit Hours
Prerequisite: EN 331

This course examines the economic and policy challenges facing the U.S. healthcare system using fundamental principles of economics as a conceptual framework. The influence of government policies and regulations on incentives, behavior, and competition as well as on the values of healthcare quality, cost effectiveness, and availability is the central theme of the course. Students will develop comprehensive policy recommendations for achieving optimal quality, cost effectiveness, and public access to healthcare services and complete a Citizenship Project in which they develop an issue advocacy plan to constructively influence government policy.

ELECTRICAL TECHNOLOGY

ELT 112 Electrical Foundations I & Lab

5 Class Hours 2 Lab Hours 6 Quarter Credit Hours

This basic course in electricity introduces students to atomic theory; the fundamental units of volts, amps, ohms and watts; Ohm's Law and the power equations; scientific notation and metric prefixes; circuit analysis of series, parallel and series-parallel circuits; Kirchhoff's laws for series and parallel circuits; and troubleshooting. Special emphasis is placed on formula transposition and algebraic notations for voltage and current. Students participate in laboratory analysis of DC series, parallel and series-parallel circuits using analog VOMS and digital multimeters with a DC power source. They are taught protoboard techniques and use the resistor color code extensively. Shorts, opens and various troubleshooting techniques are included. Students will also be familiarized with occupational trends and careers in the electrical industry.

ELT 116 Introduction to Residential Wiring/ NEC I

3 Class Hours 3 Quarter Credit Hours

Students practice navigating through the National Electrical Code standards as they learn code and trade terminology and the minimum code requirements for such topics as switching, conductor sizing, overcurrent protection, box fill, voltage drop, grounding and bonding, and wiring methods. Individual state amendments to the Code are also studied. Students diagram basic electrical branch circuits in variety of configurations.

ELT 117 Basic Wiring Techniques Lab

2 Lab Hours 1 Quarter Credit Hour

This course supports ELT 116 by introducing students to the tools of the trade. Students practice wiring techniques which will include mounting and wiring boxes and installing receptacles, lights and switches using non-metallic sheathed cable

and metallic-sheathed cable. Safe work practices are emphasized as part of preparation to enter the workforce.

ELT 122 Electrical Foundations II & Lab

6 Class Hours 2 Lab Hours 7 Quarter Credit Hours
Prerequisites: ELT 112, MA 100/110

Three key topics are covered in this course: 1) Inductance and Capacitance: topics include magnetism, coils, electromagnetic induction, capacitors, RL and RC time constants and transient voltages and currents. 2) Alternating Current Circuits: topics include sine wave analysis, RL and RC series and parallel circuit analysis, power factor and power factor correction methods. 3) Power and Generation: topics include DC and AC generation including basic armature winding theory, power and efficiency calculations showing the relationships among heat, light and power units. Throughout the course, students will construct, connect, and troubleshoot AC resistive, inductive, and capacitive circuits and analyze the circuits using measuring instruments that include the oscilloscope and frequency generator.

ELT 126 Residential Wiring/NEC II

1 Class Hour 1 Quarter Credit Hour
Prerequisites: ELT 116, ELT 117

Students continue in their studies of the National Electrical Code standards. Minimum requirements for general lighting, small appliance, laundry, and bathroom branch circuits are explored. Other topics include the required receptacle and lighting locations, attic and basement cable installation, circuit protection (fuses and circuit breakers), personnel protection (GFCI and AFCI), and device protection (TVSS). Students explore the science of light basics as well as the different types of lamps (incandescents, CFLs and LEDs) to better comprehend the importance of energy management and energy efficiency.

ELT 127 Residential Wiring Lab II

4 Lab Hours 2 Quarter Credit Hours
Prerequisites: ELT 116, ELT 117

Students wire a variety of scenarios to authentically experience working in residential situations. From given specifications, they create a set of blueprints and calculate box fill. They then rough in and trim each lab. With guidance and under supervision, they energize and test each lab wearing the appropriate PPE. Students are required to work in a neat and workmanlike manner which includes housekeeping practices. Lastly, students create invoices that detail the materials used with prices and labor costs.

ELT 132 Transformers & Lab

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: ELT 122, MA 125

Students study the construction, operation and connections for single phase transformers, three phase transformers, au-totransformers, current and potential transformers. Current, voltage and power relationships are examined. Phasing techniques, polarity checking, and closure testing are also investigated. A variety of cooling methods are also explored. Areas of practice include series and parallel connections, single-phase polarity checks, three-phase transformer connections, and buck-boost connections. National, Massachusetts and Rhode Island Electrical Code requirements are studied.

ELT 134 OSHA Construction Safety & Health

1.5 Class Hours 1 Quarter Credit Hour
Prerequisite: ELT 122

As part of OSHA's Construction Safety and Health training initiative, this course examines a variety of construction industry standards that entry-level graduates will be required to apply on construction sites. Required topics include: introduction to OSHA; electrical safety; fall protection, materials handling, storage, use and disposal; stairways, ladders, and scaffolding, excavations, confined spaces; fire prevention and protection; and occupational health and environmental controls. Students will also be required to take an off-campus CPR training course. In order to obtain their OSHA 10-hour card, students need to pass the course with a "C" average. Attendance is mandatory.

ELT 136 Advanced Wiring/NEC III

4 Class Hours 4 Quarter Credit Hours
Prerequisites: ELT 126, ELT 127

The topics covered include residential service entrance installation and calculations, conductor resistance, conductor insulation and conduit fill calculations, low voltage structured wiring, fire alarms and voltage drop calculations. All pertinent National, Massachusetts, and Rhode Island Electrical Code articles are covered. Code software will supplement the text material throughout the course.

ELT 137 Advanced Wiring III Lab

4 Lab Hours 2 Quarter Credit Hours
Prerequisites: ELT 126, ELT 127

Areas of practice include installation and testing of residential service entrance and advanced general lighting and individual appliance circuits. Additional topics covered are fire alarms, low voltage structured wiring, conduit installation, wire pulls and basic construction techniques. Other areas of practice include the use of power tools such as cutting conduit with bandsaws and sawsalls, threading conduit with manual and power threaders, and drilling concrete with hammerdrills for anchoring purposes.

ELT 212 Motor Theory

4 Class Hours 4 Quarter Credit Hours
Prerequisites: ELT 132, MA 125

This course is a study of motor action theory, motor construc-tion, operation, installation and speed control. Areas of DC motors covered are the shunt, series, compound motor and permanent magnet motors; areas of AC polyphase motors covered are the squirrel cage induction motor, the wound rotor induction motor and the synchronous motor; and the areas of single-phase motors covered are the shaded pole, squirrel cage, and universal motors. Specialty motors such servo motors, stepper motors and self-synchronous motors are introduced.

ELT 215 Motor Controls & Lab

1 Class Hour 8 Lab Hours 5 Quarter Credit Hours
Prerequisites: ELT 132, MA 125

Students explore manual and magnetic starters and control circuits. Areas of study include starting and running overcurrent protection, various two-wire and three-wire control schemes, timer applications, reversing controls, multi-speed control, pilot devices and the similarities and differences of NEMA and IEC controls. Emphasis is placed on drawing and reading schematic and wiring diagrams as well as the construction, connection, testing, and troubleshooting of various motor control circuits. Sizing of motor control equipment is performed in accordance with the National Electrical Code.

ELT 217 AutoCAD Electrical

1 Class Hour 2 Lab Hours 2 Quarter Credit Hours

The AutoCAD Electrical course will give students the necessary AutoCAD instruction so they can implement AutoCAD fundamentals into the AutoCAD Electrical software package. Students will be using the latest version of AutoCAD Electrical for the design of control system schematics and connections, control panel layout, PLC systems and electrical distribution systems.

ELT 222 Industrial Controls

6 Class Hours 6 Quarter Credit Hours
Prerequisites: ELT 132, ELT 212, ELT 215

Students will study introductory digital electronics, electromechanical sensors and electronic sensors and their applications. Topics covered include the theory and application of semiconductor diodes, transistors, SCRs, TRIACs and similar devices. Power supplies, half and full wave rectification, filtering and voltage regulation are investigated. The course includes comparing digital to analog devices, digital logical gates, their signals and truth tables. The operation and application of electronic industrial sensors is explored; types include: electromechanical devices, inductive and capacitive proximity detectors, ultra-sonic sensors, and photo-electric detectors. Analog sensors such as, thermocouples, RTD, and pressure sensors will also be discussed.

ELT 223 Industrial Controls Lab

6 Lab Hours 3 Quarter Credit Hours
Prerequisites: ELT 132, ELT 212, ELT 215

Students practice a variety of conduit bending techniques, conduit installations, wire pulls, the drawing and reading of three-phase motor control schematics and wiring diagrams using AutoCAD Electrical. Students also will construct, install, connect, test, and troubleshoot various three-phase motor control configurations. Other areas of study include a review of OSHA requirements for "lockout/tagout."

ELT 226 Introduction to Programmable Logic Controllers & Lab

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: ELT 215

This basic course is an introduction to the programmable logic controller (PLCs) and automation systems. Using the Allen-Bradley Micrologix 1200 and RS Logix 500 software, students learn basic instructions, ladder logic fundamentals, and programming techniques using series and parallel elements. Timers and counters are also introduced. Creating and writing basic introductory programs for the Allen-Bradley Micrologix 1200 programmable logic controller constitutes the major portion of the lab. Students then enter their programs into the Micrologix 1200 training unit, debug the programs and verify the correct operation. Students will also practice the practical wiring and installation of PLCs.

ELT 232 Electronic Motor Drive Systems

5 Class Hours 5 Quarter Credit Hours
Prerequisites: ELT 222, ELT 223

This course begins with a review of the physics of motion as well as a review of AC and DC motor theory. The following topics will be discussed: reduced voltage starting techniques of AC motors, Variable Frequency Drives (VFD), constant torque and variable torque applications, braking methods, VFD installations and common bus technology. Students will also investigate and diagnose the effects that VFDs have on power source quality, such as harmonic distortion. DC drive technology topics encompass thyristor control, tachometer feedback, DC drive controls, regen and dynamic braking. The course will also include closed loop control methods and the sensors used in motor control. Proportional, Integral, Derivative (PID) control will be introduced and rotary optical encoders will be used for closed loop motor control.

ELT 233 Advanced Industrial Controls Lab

4 Lab Hours 2 Quarter Credit Hours
Prerequisites: ELT 222, ELT 223

Students continue to work on installation and wiring of single- and three-phase motor branch circuits for various motor control configurations. Students will study the technologies of the FMS-200 Flexible Manufacturing System, a complete, automated assembly system utilizing PLCs, variable speed motor drives, various sensing technologies, pneumatic driven control systems, and industrial networks. Also included are labs which involve the wiring and/or programming of such devices or systems as DC drives, AC variable frequency drives, and troubleshooting labs. Other areas of practice include the use of power tools such as cutting conduit with band-saws and reciprocating saws.

ELT 236 Advanced Programmable Logic Controllers & Lab

2 Class Hour 6 Lab Hours 5 Quarter Credit Hours
Prerequisite: ELT 226

Using the Allen-Bradley SLC500, Micrologix 1500 and RSLogix 500 software, students learn advanced programming techniques. Topics include SLC500 advanced instruction set, analog control, operator interface using PanelView displays, introduction to SCADA systems, and the interfacing PLCs with other automation devices such as Variable Frequency Drives. Industrial networking which incorporates Ethernet IP, ControlNet and DeviceNet will also be introduced. Students create, write and wire programs using the Allen-Bradley SLC500 PLC and the PanelView operator interface to interface the PLC with AC drive systems. Students will practice advanced analog programming, such as temperature control using thermocouples. Additional lab projects will incorporate 24 volt DC wiring of sinking and sourcing inductive sensors to the SLC 500 PLC.

ELT 280 Photovoltaic Systems & Lab

4 Class Hours 4 Lab Hours 6 Quarter Credit Hours
Prerequisites: Students in Electrical Technology with Renewable Energy (ELRE) must achieve a cumulative grade point average of 2.50 throughout the program and hold their OSHA card in order to enter the seventh quarter of the program.

This course focuses on the design, selection and installation of solar photovoltaic systems. The course will include an in-depth exploration of the mathematical equations to ensure that the photovoltaic system design and installation is appropriate for its intended use and will meet all NEC Article 690 code requirements. Students will prepare a quarter-long project that will require students to research all components necessary for a "Stand Alone PV System." The labs will include desktop trainers which will simulate the "real world" applications of PV systems and reinforce the principles of photovoltaics. Once students understand basic PV theory, they will then build an actual grid-tied life-sized mockup utilizing the actual components of a grid-tied PV system: PV module, PV combiner box, inverter, disconnects, metering, and grounding.

ELT 290 Wind Turbine Technology and other Renewable Energy Sources

4 Class Hours 4 Quarter Credit Hours
Prerequisites: Students in Electrical Technology with Renewable Energy (ELRE) must achieve a cumulative grade point average of 2.50 throughout the program and hold their OSHA card in order to enter the seventh quarter of the program.

This course focuses on wind power and explores other renewable energy sources such as hydro-electric. Students will examine turbine components, installation, power in the wind, environmental impact, maintenance, practicality, site sustainability, and local regulations. The installation of NEIT's 100kw wind turbine will also be studied, including the data provided by online live monitoring of the turbine. Students will also participate in a quarter-long project culminating with group presentations on the pros and cons of fossil fuels, including nuclear, versus various renewable energy fuels. Students will also complete hands-on exercises to explore some of the wind technology topics.

ELECTRICAL ENGINEERING TECHNOLOGY

ELT 310 Programmable Automation Controllers and Lab

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours

This course will cover advanced PLC programming using the Allen Bradley Compact Logix PAC and RSLogix 5000 software. Students will use several PLC languages including Ladder Logic, Sequential Function Chart, Function Block Diagram and Structured Text. Students will also be introduced to Ethernet IP I/O control and VFD network control. Students will develop working automation systems using the Allen Bradley Compact Logix PAC. Students will develop these programs in several different PAC programming languages. Labs will also consist of "Remote I/O" systems over Ethernet IP.

ELT 314 C++ Programming

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours

This course will focus on variables, input and output objects, if-else structures, switch statements, while and do looping structures, functions and scope of variables, one- and two-dimensional arrays, pointers, and character strings. The flowcharts will be used as a visual aid in solving problems.

ELT 320 Supervisory Control And Data Acquisition (SCADA) and Communication Systems and Lab

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisite: ELT 310

This course will show students the use of SCADA software in various industries. Students will investigate the uses of SCADA systems and how they are used in today's industrial world for system control and data collection. Topics will include: system communications such as system alarming, wireless systems, radio telemetry, Ethernet Networks; and data communication systems for computers and industrial network protocol standards. The lab will show students how to develop SCADA software systems for interaction with specific industrial/commercial systems such as water/wastewater. Rockwell Software's Factory Talk SE software will be used for these systems. Data networks, such as Ethernet IP, will be implemented as part of the SCADA programming.

ELT 360 Embedded Microcontrollers

4 Class Hours 4 Quarter Credit Hours
Prerequisite: ELT 314
Co-requisite: ELT 362

The concepts of how a microprocessor/microcontroller processes data will be studied. Arithmetic, logic, control functions and structures will be studied using C/C++ language instructions. Serial communications to a PC and serial LCDs along with interrupts will be included. The controlling of external hardware such as ultrasonic devices, servo motors, DC motors, and stepper motors will be studied. The concepts of flowcharting will also be presented throughout the course. Arduino and RFF flowcharting software will be utilized throughout the quarter.

ELT 362 Embedded Microcontrollers Lab

4 Lab Hours 2 Quarter Credit Hours
Prerequisite: ELT 314
Co-requisite: ELT 360

This course will focus on the Arduino Microprocessor and instruction set. Students will write C++ code for labs that require the use of timers, serial communication, and interrupts. Control of sensors and electronic devices will also be covered.

ELT 364 Digital Circuit Design

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours

This course covers digital circuit functions, the synthesis of logic functions with PLDs and simulation of PLD designs.

ELT 374 Circuit Analysis I

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisite: MA 210

This course covers nodal and mesh analysis of circuits, applications of Kirchhoff's current and voltage laws, superposition, Norton and Thevenin equivalent circuits. These theorems are used to solve passive and active circuits, which contain both dependent and independent sources. Basic AC circuit analysis is introduced as well as complex numbers. PSpice analysis techniques are used to model both DC and AC circuits.

ELT 384 Circuit Analysis II

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisites: ELT 374, MA 310

This second course in electrical circuit analysis extends the principles developed in Circuit Analysis I to circuits which are stimulated by transient and periodic voltage and current sources. This calculus-based course will continue the use of PSpice programming to examine passive and active filters, op-amp circuits, transfer functions, frequency response and the characteristics of periodic waveforms.

ELT 410 Electrical Design and Energy Management & Lab

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours

This course will demonstrate the process of designing the electrical distribution systems for commercial and industrial buildings. Students will identify all distribution components, understand specialized electrical needs, design switchboard and panelboard layouts, design and draw a complete electrical plan showing general purpose, specialized and lighting loads as well as the raceways that feed them. Students will use AutoCAD MEP for all system design and layouts. Students will be required to design their systems by applying all necessary National Electrical Codes (NEC). The course will also explore the causes of arc flash faults and calculate arc flash potential and common power quality issues and how to apply common mitigation strategies.

ELT 420 Building Automation Systems & Lab

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisite: ELT 410

This course focuses on the devices that monitor and control building automation systems, such as HVAC, boiler and pump controls, lighting, security and fire suppression systems. Topics will include the operation, signaling and functions of the common sensors, actuators, and other control devices that are commonly used in building automation systems. Building Automation Network Protocols, such as BACnet, will also be discussed. Students will learn how "Smart" buildings control their respective systems with little to no intervention from building personnel. Students will design and build their own

systems using manufacturer configuration software for all systems. Programming will be done for total control and interaction of these systems for building optimization and energy conservation.

ELT 463 Sensors and Signal Conditioning

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisite: MA 310

This course will cover the elements of a control system which will include sensors, transducers and actuators used in process control systems. The analog and digital signal conditioning and instrument calibration with these I/O devices will also be covered. Laboratory assignments will be on sensor signal conditioning, instrumentation calibration and networking of these devices.

ELT 472 Introduction to Senior Project

2 Class Hours 2 Quarter Credit Hours
Prerequisites: ELT 320, ELT 360, ELT 362, ELT 463

This course results in the definition of the Senior Project. The senior project proposal is written and presented at this time. The proposal completely describes the technical content of the senior project, including theory of operation, what is being delivered, a schedule, specification, parts list, system block diagram, schematics, graphs and flow charts.

ELT 475 Automation and Process Control & Lab

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisites: ELT 310, ELT 320, ELT 384, ELT 463, MA 310

This course includes the study of closed-loop process control techniques as applied to automation and systems control. Topics include linear systems analysis, proportional, integral, and derivative control analysis, temperature controllers, composite controller analysis including PID control, transient response analysis, and digital systems design techniques. The lab will use PID controllers and Programmable Automation Controllers (PAC), driven automation control to demonstrate the closed loop control of automated systems.

ELT 480 Senior Project

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: ELT 472
Co-requisite: ELT 482

This course gives each student the opportunity to design, fabricate, test troubleshoot, and document a project of their choice. This is primarily a lab course where students are expected to use all their skills to demonstrate their technical abilities learned in the bachelor's program. This experience simulates the work environment by requiring students to follow a plan, meet the technical specification for their deliverable, and produce a working system on time.

ELT 481 Engineering Internship

20 Hours per week 4 Quarter Credit Hours

Students will have the opportunity to integrate career-related experience into the undergraduate program by participating in planned, supervised employment in a related field. This will contribute to the student's personal and professional growth in an Electrical Engineering Technology field and provide invaluable career awareness for students. The internship will also complement what has been learned in the classroom. The internship will include a reflection or evaluation by students at the completion of the internship. This internship requires a minimum of 20 hours per week.

ELT 482 Senior Project Seminar

2 Class Hours 2 Quarter Credit Hours
Prerequisite: ELT 472
Co-requisite: ELT 480

This companion course to the Senior Project (ELT 480) provides students the opportunity to communicate progress on the senior project in both oral and written reports. In a final session, all projects are presented and demonstrated to the class and faculty.

ELT 486 LabVIEW Programming

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisite: ELT 314 or MCT 314

This course will use LabVIEW, a graphical programming language, for data acquisition and control of I/O and instruments. Students will learn to apply standard VIs (virtual instruments) and design applications. Interface to external devices and instruments will also be covered.

ENGLISH (COMMUNICATIONS CORE)

EN 101 Introduction to Writing and Workplace Communication

4 Class Hours 4 Quarter Credit Hours
Placement: Based on an evaluation of a writing sample or successful completion of EN 030.

English 101 is an introductory course designed to enhance students' basic writing skills and to expose students to the type of writing they will face in the workplace. Students will gain practical experience with research, planning, and revising texts and will learn to produce effective memos, e-mails, letters, faxes, and short reports. At the conclusion of the course, students will assemble and submit a Final Portfolio of revised workplace writing and deliver an oral presentation based on their writing and research.

EN 102 Critical Thinking and College Writing

4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 101 or EN 110 or placement based on evaluation of a writing sample.

English 102 is a college freshman-level course designed to immerse students in critical thinking and the writing process. Topics will focus on issues prevalent in an individual student's home town, local region, or state and emphasis will be placed on civic engagement through studying local laws and ordinances as well as news accounts and editorial pieces. Through drafting, revising, and writing to learn, students will strengthen their ability to interpret, analyze, and evaluate the ideas presented in the course readings, lectures and discussions.

EN 110 Healthcare Communication Skills

4 Class Hours 4 Quarter Credit Hours

This course is designed to introduce students to the principles of effective communication in the healthcare professions. Class meetings involve considerable attention to group dynamics, teamwork, listening and response techniques, and communication patterns. Through role-playing/simulations, small group, and individual presentations, students will be given opportunities to practice critical competencies in therapeutic communications necessary to ensure quality care outcomes.

EN 211 Oral Communications

4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 101 or EN 110 or placement

This is an introductory course with an emphasis on oral communication theory and practice, providing a basic understanding of the significance of oral communication as well as instruction and practice in the basic skills of public speaking. The course is intended to help students develop skills in speaking, organizing thoughts, and critical analysis. Major emphasis is placed on the preparation and presentation of formal speeches.

EN 331 Research Writing

4 Class Hours 4 Quarters Credit Hours
Prerequisite: EN 102

English 331 introduces students to the process of discovery through scholarly writing and research. Beginning with the idea that academic writing is a conversation, a collegial exchange of ideas to pursue new knowledge, this course breaks the process down into a series of comprehensible habits of mind and investigative skills: active reading, critical analysis, argumentation, research, and communication. Valuing complexity and creativity, they transform information by adapting it and creating something new. The central goal for students in this course will be to produce a research paper that presents an argument based on critical thinking – original inquiry, thoughtful reflection, lucid synthesis, and persuasive reasoning.

EN 421 Technical Communications

4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 331 or its equivalent

Technical communications is, in essence, explaining complex content. It encompasses writing for a broad range of technical and general audiences in virtually all media. It involves analyzing audience, purpose, and content, planning and organizing content to meet goals, effective use of graphics, and effective oral presentation.

EN 422 Writing in the Health Sciences

4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 331 or its equivalent

Writing in the Health Sciences is an advanced writing course focusing on preparing students for the challenges of successful written communication common in the health science professions. Students will learn writing techniques and practices to communicate professionally and clearly to the three main audiences of the health provider: other professionals, patients and clients, and the public.

ELECTRONIC SYSTEMS ENGINEERING TECHNOLOGY

EST 110 Electrical Circuit Theory I

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours

The concepts of current, voltage, power, energy, and resistance are studied along with their relationships using Ohm's Law and series and parallel concepts. Topics also include DC sources and magnetism. In the lab portion of the course, students will construct selected circuits, following schematic diagrams, then test and evaluate the circuits using the appropriate test equipment.

EST 111 Instruments and Basic Circuit Construction

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours

This course is an introduction to the use of the basic electronic test equipment used in industry, including power supplies, digital multimeters, function generators, and oscilloscopes. PC board through-hole soldering and surface mount devices (SMD) will be practiced. Other topics include AC sources, safety, basic electronic circuit construction on breadboards, fabrication of electronic connection cables, and troubleshooting concepts. Students will fabricate and test a PC board-based project. Computer-aided circuit simulation is introduced.

EST 112 Introduction to Engineering Technology
2 Class Hours 2 Quarter Credit Hours
THIS COURSE IS TAUGHT ONLINE
This course is an introduction to engineering technology that gives an overview of the engineering profession with sample applications of typical duties, tasks, and environment of the engineer and technologist today. The future of engineering technology is also discussed.

EST 120 Electrical Circuit Theory II & Lab
4 Class Hours 2 Lab Hours 5 Quarter Credit Hours
Prerequisites: EST 110, EST 111, MA 100/110
In this course, students will gain the necessary skills to analyze and evaluate inductors and capacitors in both AC and DC circuits. The concept of reactance and impedance in sinusoidal circuits are studied along with transformers, resonant circuits, and passive filters. Students will study the function as well as the applications of the devices. The use of circuit simulation and computer-aided analysis are used in the classroom.

EST 126 Digital Logic Systems I
2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: EST 110, EST 111, MA 100/110
The primary objective of this course is to have students understand basic digital gates and circuits. Students will become proficient at understanding and interpreting an IC data specification sheet's parameters and truth tables. This course introduces binary and hexadecimal numbers, Boolean algebra, truth tables, combinational logic gates, adders, flip-flops, encoders, decoders, comparators, multiplexers and demultiplexers as well as basic ripple counters. Seven-segment displays are studied. Circuit simulation and computer-aided analysis are used in the classroom. Digital circuits will be constructed and analyzed that include the use of function tables and manufacturers' data sheets. Students will develop skills in the use of specialized test equipment used to analyze and troubleshoot digital circuits.

EST 131 Semiconductor Theory
4 Class Hours 2 Lab Hours 5 Quarter Credit Hours
Prerequisites: EST 110, EST 111, MA 100/110
This course will give students the necessary skills to analyze and evaluate the operation and performance of solid state electronic circuits. Areas of study will include diodes, DC power supplies, voltage regulators, and transistors (BJT, JFET, and MOSFET) used in switching and in signal amplifiers. Laboratory work and computer-aided analysis are designed to correlate with the theory. A project that consists of fabricating a variable voltage regulated power supply is included in the course.

EST 138 Linear Integrated Circuits
3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisites: EST 110, EST 111, MA 100/110
In this course, students will learn the basics of operational amplifiers (op-amps) which are the most versatile and widely used of all linear integrated circuits. Topics will include open and closed-loop response, inverting and non-inverting amplifiers, comparators, level detectors, summing amplifiers, instrumentation amplifiers, isolations amplifiers, and active filters. Lab experiments, circuit simulation and computer-aided analysis will be used to analyze and evaluate the various op-amp circuits.

EST 167 Robotic Control Systems
3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
In this course, students will be introduced to the versatility and construction of robots. Students will engage in hands-on robot construction and control emphasizing technological systems that include the electrical, mechanical, micro-controller programming and sensor applications. Students will be challenged to get a robot to perform specific and exacting tasks as assigned by the instructor.

EST 226 Digital Logic Systems II
2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: EST 126
This course covers a higher level of chip integration such as synchronous counters, storage registers and shift registers, astable and monostable multivibrators, analog to digital and digital to analog circuits, and computer and microprocessor memory systems. Lab experiences will include simulation of designs with MultiSim as well as building, testing, and troubleshooting circuits on a protoboard.

EST 236 Microprocessor Control Systems
4 Class Hours 2 Lab Hours 5 Quarter Credit Hours
The concepts of how a microprocessor processes and stores data will be studied. The interfacing and control is presented from a hardware and software view. Computer to peripheral interfacing and troubleshooting is emphasized. Students will study assembly language programming to control several systems.

EST 242 Industrial Systems
3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisites: EST 131, EST 138, MA 125
In this course, students will study the operation and use of the electronic and electro-mechanical devices used in industrial control circuits. Topics will include thyristors (SCR, DIAC, TRIAC, UJT, PUT) DC and AC motor control, stepper motors and drivers.

EST 246 Data Acquisition Systems
2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: EST 131, EST 138, EST 236, MA 125
This course is designed to introduce students to the transducers, sensors and circuits used in industry for the purpose of controlling a manufacturing process. Topics of study will include analog and digital signal conditioning (ADC/DAC) and sensors. Sensors to be studied will include thermal, proximity, optical, ultra-sonic, position, and pressure. The lab portion of the course is designed to give students the experience of working with and implementing the sensors and circuits studied.

EST 250 Telecommunications Systems
3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisites: EST 126, EST 131, EST 138, MA 125
A course designed to give students an understanding of the complexity of a telecommunications network. Students will explore the signal conditioning need from the originating signals to the options of various transmissions mediums. Topics of study will include transmission lines, electromagnetic propagation, tuned circuits, oscillators, AM and FM principles, PCM, multiplexing, and fiber optics. Laboratory projects will include the construction of an RF transmitter/receiver, fiber optic fusion slicing techniques, and TDR and OTDR operation. Circuit simulation and computer-aided analysis will also be used.

EST 254 Introduction to Programmable Controller (PLC) Systems
3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisite: MCT 136 or EST 242
This course will provide students with a broad-based working knowledge of programmable controllers and how the PLC is connected to external components of an operating control system. The major portion of the lab uses sample programs to demonstrate how control systems and control programs for the programmable logic controller training unit work. Students will enter their programs into the training unit, debug the programs, and verify the correct operation.

EST 255 Renewable Energy Systems
2 Class Hours 2 Lab Hours 3 Credit Hours
Prerequisites: EST 110, EST 111, EST 120, MA 125
In this course, students will explore the concepts of renewable energy and the components that comprise various renewable energy systems. The focus is primarily on smaller residential systems of less than 10KW. Students will explore different system configurations such as PV (photovoltaic) Direct, Grid Direct, and Stand Alone configurations. Various components to these systems will be investigated such as PV modules, charge controllers, batteries and inverters and how they are

interconnected to form these systems. Students will also gain an appreciation for how a system can be expanded by adding a wind turbine to construct a hybrid system.

EST 258 Printed Circuit Board Design

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisites: EST 236, EST 250, EST 254

This course presents the design flow for mainstream professional Printed Circuit Board (PCB) design to students. All the steps in PCB layout are studied from schematic capture, netlisting, importing and setup to component placement, trace and copper placement, routing and editing, solder mask, and output for manufacturing and assembly. Students work in teams in a simulated corporate environment and present and demonstrate the final capstone project.

EST 260 Biomed Systems

2 Class Hours 2 Lab Hours 3 Credit Hours
Prerequisites: EST 110, EST 111, EST 120, EST 138, MA 125

This course introduces students to the basic functions of the human body, biomedical instrumentation and measurement, sensors and the typical types of biomedical equipment used in the medical field in surgical procedures, monitoring, diagnostics, and therapy, as well as test equipment and safety requirements.

GAME DEVELOPMENT & SIMULATION PROGRAMMING

GDS 110 Introduction to Game Programming

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours

C++ will be used as the vehicle to introduce flowcharting, control structures, calculations, interactive programming techniques, functions, and array processing. Students will learn to write programs that implement techniques and theory necessary for basic game development. Laboratory projects will grow in complexity as students gain hands-on experience. Both personal and gaming applications will be provided.

GDS 111 XHTML/Javascript

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours

In this course, students will gain an introduction to Internet technologies and basic programming logic through the study of HTML 5, XHTML, Cascading Style Sheets, and Javascript. File organization and implementation of web graphics will be stressed throughout this course.

GDS 114 Introduction to Game Development

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours

This course is an overview of the game development industry. Students will learn what is involved in developing a profes-sional game from start to finish. Topics include the game development life cycle, developing a budget and game specification documents. Students will also be exposed to important physics, math and artificial intelligence concepts relevant to game development.

GDS 115 Digital Graphics for Gaming

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours

Students will develop a working knowledge of how 2D images are manipulated on the desktop, using Adobe Photoshop. Topics consist of: image creation, retouching, color correction, and compositing images together to form a final design. Emphasis is placed on the use of Photoshop as it pertains to creating and editing 2D images used in games.

GDS 121 Intermediate Game Programming

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: GDS 110

A study of intermediate game programming using C++ will be covered. Topics include: string handling, intermediate array processing, passing by reference, pointers, and an introduction to creating, editing, and updating data files.

GDS 125 2D Assets and Animation

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: GMW 112 or GDS 115

This course is an introduction to game development for the Internet using Adobe Flash. Students will learn the principles of two-dimensional animation, vector graphics, tweening, objects, and Flash video compression applicable to web delivery.

GDS 128 Visual Communications for Game Designers

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: GDS 115

Visual communication is often more effective than written or spoken communication. Like other forms of communicating, visual communication has its own set of rules, slang and conventions. The goal of this course is to teach students about the fundamentals of effectively organizing and communicating ideas through graphics. Among the topics addressed in this course are the logical organization of information, presentation skills, and the importance of understanding cultural and historical aesthetics.

GDS 131 Advanced Game Programming

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: GDS 121

A study of advanced game programming topics will be covered. Topics include: sorting/searching arrays and data files, classes/objects, code libraries, and advanced pointer techniques. This course will also teach students object-oriented principles and implementations including inheritance, compo-sition, encapsulation, data hiding, overloading, overriding, and polymorphism.

GDS 134 Game Persistence

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: GDS 121

This course will expose students to database design principles such as relational databases, normalization and entity relationship diagrams. These principles will be applied to contemporary database management systems such as MySQL or Access and accessed through a modern object-oriented language such as C++. Students will learn to connect a C++ program to a database to store pertinent game information.

GDS 137 Game Prototyping

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisites: GDS 110, GDS 125

Using Adobe Flash, students learn additional game animation techniques, interactive game processing using Action Scripting, third-party gaming tools, distribution output for the web and disc-based media.

GDS 241 API Programming

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: GDS 131

This course will teach students to create a game program using an industry standard graphics API. Using C++ and a graphics library such as DirectX or OpenGL students will learn the fundamentals of 2D programming. Topics include scrolling, sprites and collision detection and incorporating sound effects.

GDS 243 MOD

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: GDS 114

This course will enable students to rapidly prototype their vision for a game. Students will learn how to create good assets and integrate them. This builds students' management skills and they will learn how to collaborate with a group, and work within a timeframe toward specific deadlines and goals. Also, this course will offer students a taste of the experience of being a game developer. It will help them understand how to iterate to tune the core mechanic of the game to ensure the final game will be polished and fun.

GDS 252 Algorithms and Data Structures

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: GDS 131

This course includes an overview of the algorithms and data structures used in gaming and simulation applications today. Topics include, but are not limited to, linked lists, queues, stacks, user input as well as a variety of AI techniques used in game development.

GDS 261 Game Architecture

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: GDS 252

Students will study current game development methods. Topics include an overview of game architecture, game engines, and graphic libraries. Students will develop simple games using a popular game engine.

GDS 267 Portfolio Development

2 Lab Hours 1 Quarter Credit Hour
Prerequisites: GDS 111, GDS 137

Students will put together a portfolio that will be used to demonstrate their school work to potential employers.

GDS 268 Game Studio

6 Lab Hours 3 Quarter Credit Hours
Prerequisites: GDS 241 and GDS 252 or GDS 137, VGD 253 and VGD 255

This course is designed to challenge students' organizational, design and programming skills. Students will be part of a small development team of designer and programmers, and tasked with producing the code and materials assets necessary to complete a full game product.

GDS 370 Advanced Game Design

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: GDS 375

Students will study advanced aspects of game design. Topics include genre-specific design issues, storytelling, level design, puzzle design as well as the game development life cycle.

GDS 371 Tools and Engine Development

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisites: GDS 243, GDS 261

Students will learn the development of tools for the game industry and the development of the primitive components of a game engine. Topics include editing tools, asset pipeline management system, converters, database management, networking, interpreter, and defect tracking systems.

GDS 373 Advanced Algorithms and API

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisites: GDS 241, GDS 252

This course builds on GDS 252 and incorporates advanced algorithms with the use of an API such as DirectX. The focus will be on the practical application of these techniques to design efficient algorithms. Topics include: asymptotic notation, recurrences, lower bounds for worst case and average case, dynamic programming, searching algorithms, sorting algorithms, advanced computation and related research issues.

GDS 375 Simulation and Serious Games

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: GDS 268

This course involves the exploration, design, and development of simulation games and serious games. The questions that will dominate this course are these: How do we represent reality in a simulation? How do we balance simplicity, efficiency, and playability against realism, richness and complexity? Students will also create a serious game in which education (in its various forms) is the primary goal, rather than entertainment.

GDS 381 Software Testing and Quality Assurance

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: GDS 261

Testing is an integral part of the system development function. Students will gain an appreciation of why software testing and quality assurance is so important. Topics include the types of testing, the testing team, defect tracking, test software automation, and the testing philosophy.

GDS 383 Console Game Programming I

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: GDS 241

This course emphasizes developing games that could be deployed on a popular console system as well as PC systems using industry standards languages like C# and frameworks like XNA. Students will learn how to dissect existing 2D games, interact with console controllers, keyboards, and mice, and manage output using boundary handling, collision detection, texturing, and character animation.

GDS 399 Console Game Programming II

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: GDS 383

Students will expand their skills by implementing intermediate 2D gaming topics like level design, handling multiple players, and porting their games to consoles. Topics include networks, writing/reading packets, latency, network libraries, and publishing games to a console. Students are also introduced to 3D gaming concepts, where they will explore 3D gaming architecture, modeling via code, texturing, lighting, and camera positioning. Through the use of class discussion and gaming projects, students will create compelling game experiences through environments by designing their own 2D and 3D games.

GDS 402 Level Design and Gameplay Development

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: GDS 243, GDS 370

This class is the continuation of MOD class with a twist. Using a popular game engine, students will design and develop a multi-player, first-person shooter level that is different from what the engine was designed to do. Using displacements or other techniques, these environments include underwater, Mars, Moon, or inside the human body. Students also need to create a unique gameplay mechanic through coding or custom modeling. The team project seeks to outline a heuristics of level design in FPS shooters. This class will also include the examination of a game's gameplay, its agents, and spatial components which is necessary for the development of a design method that will lead to ultimate level design.

GDS 404 Artificial Intelligence

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: GDS 373

This course will explore artificial intelligence as a coherent body of ideas and methods to acquaint students with the classic programs in the field and their underlying theory. Students will explore this through problem-solving paradigms, logic and theorem proving, language and image understanding, search and control methods, and learning. Other topics include intelligent agents, state-space search, game playing, knowledge representation, reasoning under uncertainty, machine learning, and data mining.

GDS 405 Console Game Programming III

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: GDS 399

Students will explore 3D gaming architecture, level design, object transformations, and environmental animation and learn to implement industry shortcuts that deal with design issues having to do with 3D hardware, programming objects and camera motions, collision detection, character animation, special effects, and 3D game networking. Through the use of class discussion and gaming projects, students will create compelling game experiences through environments by designing their own 3D games.

GDS 410 Introduction to Senior Project

2 Class Hours 6 Lab Hours 5 Quarter Credit Hours
Prerequisites: GDS 402 and (GDS 370 and GDS 405) or VGD 404

The objective of the senior project is to integrate skills learned during the students' time at New England Institute of Technology. Within a team of at least 2 and no more than 4 students, students will develop an industrial-strength game. The Introduction to the Senior Project spans the first 10 weeks of this period and the focus of this course is on the design of the game.

GDS 413 Advanced Portfolio Development

1 Class Hour 1 Quarter Credit Hour
Prerequisites: GDS 402
Students will put together a portfolio that will be used to demonstrate their school work to potential employers.

GDS 420 Senior Project

2 Class Hours 8 Lab Hours 6 Quarter Credit Hours
Prerequisite: GDS 410
This course provides an opportunity for each student to develop a substantial project in an area of interest as proposed in GDS 410. The culmination of this course is a major presentation of the project. The project will be evaluated by three faculty members.

GDS 422 Emerging Technologies in Game Development

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisites: GDS 370, GDS 402
This course is a discussion of emerging and future technologies that are likely to impact the industry. Topics chosen by the instructor will include advances in hardware, software, networking, gaming, the Internet, and leaders in the game development industry. In-depth research of the chosen topics will be conducted and students will work on hands-on projects that involve specific emerging technologies.

GRAPHICS, MULTIMEDIA, AND WEB DESIGN

GMW 100 Digital Photography I

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
This course introduces GMW students to the technology and techniques of digital image creation using SLR cameras. Starting with "what is digital" theory and principles, this course will train students in basic digital still camera photography, composition, and storage technique. It will then continue with each student shooting and editing their own photo essay, to be used as a first portfolio piece.

GMW 102 Digital Illustration

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: GMW 112, GMW 123
This is an introductory studio course that presents visual ideas using digital illustration. The course focuses on computer-based drawing and design techniques. Technical aspects of industry-standard illustration software will be studied, and studio projects will be developed from concept through completion. Course completion will result in a strong working foundation in the rudiments of digital illustration for professional practice.

GMW 110 Introduction to Web Design

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisites: GMW 100, GMW 112, GMW 123
Co-requisite: GMW 223
This course is an introductory exploration of the Internet and World Wide Web technology. Search strategies, web page design and construction, SEO copywriting, and social media integration will be covered. Dreamweaver. HTML and Photoshop will be used.

GMW 112 Digital Graphics I

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Students who take this course will develop a working knowledge of how 2D images are manipulated on the desktop, using Adobe Photoshop. Topics consist of: image creation, retouching, color correction, and compositing images together to form a final design.

GMW 122 HTML

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
This course will train students in the construction of web pages integrating the eXtensible HyperText Markup Language (XHTML), CSS, and HTML5. Students will construct web documents by hand coding XHTML and CSS. Topics will include designing for SEO, and responsive mobile delivery.

GMW 123 Design I

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
This course teaches the foundational guidelines that enable the creative design of graphics to fulfill specified communications requirements.

GMW 129 Project Planning and Estimating

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Students will plan and price multimedia projects. Focus will be on the design and implementation of concepts through production planning and budgeting for a multimedia project.

GMW 141 Design III

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: GMW 102, GMW 112, GMW 123, GMW 223
Co-requisite: GMW 231
This course encourages and develops students' creative skill, self-confidence, and technical and design ability to create a personal graphic, visual identity as the basis for each student's personal brand. Topics include branding, typography and font use, resolution and color for printing applications, and graphics manipulation for print, e-publishing, and web delivery.

GMW 201 Intro to Typography

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: GMW 112, GMW 123
This course explores aspects of the anatomy of type and letterform characters, typeface/typestyle recognition and type measurements. Also covered are legibility, readability, type terminology and appropriate usage for multimedia applications. The class will analyze the ways in which type is used as a design element, and complete design projects that exhibit a professional awareness and appreciation of typographic expression. Computer applications will be used as typographic layout and design tools.

GMW 205 Digital Photography II

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisites: GMW 100, GMW 112, GMW 123
This course follows the techniques begun in GMW 100 Digital Photography I. Students will progress with their use of full manual exposure controls. Topics include professional techniques for creating product shots, portraits, and stock photography. Students will complete the course with a strong foundation in digital camera techniques for various print photography and e-publishing applications.

GMW 212 Digital Graphics II

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: GMW 112, GMW 123
Digital Graphics II is an advanced course that continues the topics covered in GMW 112 Digital Graphics I. Using Photoshop, students will analyze images to obtain the best output results for web and print distribution. Topics to be covered include: camera RAW formats, analyzing and correcting portrait photographs, using channels to make complex selections, and using Photoshop's automate features to expedite workflow. The proper way to scan images and to correct scanning problems will also be covered. Students will use photographs taken in GMW 205 (Digital Photography II) to prepare portfolio-ready photography pieces with detailed digital enhancements.

GMW 215 Web Content Management with WordPress

4 Class Hours 2 Lab Hours 5 Quarter Credit Hours
Prerequisites: Quarters I through IV technical courses
Co-requisite: GMW 272
The course explores the overwhelming popularity of Content Management Systems (CMS) to display and manage content for the web. Students will build a self-hosted WordPress website portfolio and learn all the features to modify the layout and display of content.

GMW 220 UI/UX Design

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: GMW 123, GMW 223
This course is an introduction to the theory and application of user-centered design for screen-based media. User Interface/User Experience (UI/UX) design focuses on the end-user ex

perience in support of defined marketing objectives. Students will utilize information architecture to create interface design concepts.

GMW 223 Design II

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: GMW 112, GMW 123
Co-requisite: GMW 110

Students will integrate the elements and principles of interactive design and use them to solve specific design problems.

GMW 231 Digital Publishing I

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisites: GMW 100, GMW 112, GMW 223
Co-requisite: GMW 141

Students will learn the principles, process and techniques of digital publishing using Quark and Adobe InDesign.

GMW 232 Digital Publishing II

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisites: GMW 102, GMW 112, GMW 141,
GMW 201, GMW 231

Digital Publishing II builds on skills learned in GMW 231 Digital Publishing I, including advanced software techniques and features, and layout/design concepts. File preparation and aesthetic design awareness for digital publishing such as e-pubs and interactive e-readers will be covered. Through a combination of quizzes, exams and a capstone studio project, the student's knowledge and expertise with digital publishing will be strengthened and refined.

GMW 233 Package Design I

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: GMW 141, GMW 231

Every package is seen by 100% of a brand's consumers. This course introduces students to the 3D design, art, and technology of enclosing, protecting, and promoting products for distribution, sale, and use. Three dimensional packages will be printed and constructed.

GMW 251 Special Topics: GMW

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: GMW 141, GMW 220, GMW 231

This is a capstone course that focuses upon the newest and most pressing issues that affect multimedia. Subject matter in this course may vary from quarter to quarter.

GMW 272 Associate Portfolio

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: GMW 102, GMW 141, GMW 201, GMW 205,
GMW 212, GMW 220, GMW 231
Co-requisite: GMW 215

Associate Portfolio prepares students to build a graphic design portfolio with professional quality, business-oriented design

projects, and also addresses portfolio presentation techniques for an interview situation. Topics such as self-evaluation, personal branding, choosing the right portfolio format and pieces, arranging pieces in the portfolio and executing a well-paced, detailed oral presentation will be covered. Students will leave the course with a strong understanding of their own strengths and talents that may be brought to the workplace, and the skills to present or e-deliver their work with confidence.

GMW 280 Cooperative Work Experience

15 Lab Hours 3 Quarter Credit Hours
Prerequisites: GMW 141, GMW 231

Students will gain practical work experience through employment in a local company or organization. Students must submit a written application to a designated faculty member, with approval based on the student's academic achievement, attendance, and demonstrated skill sets as they match the employer's defined job skill requirements.

GMW 290 Digital Publishing II / Package Design I

1 Class Hour 2 Lab Hours 2 Quarter Credit Hours

This ten-week, two-subject course will be required for students who graduated with a pre-October 2013 GMW AS degree with a concentration in Multimedia, and thus did not yet take the Digital Publishing II and Package Design I courses.

GMW 291 Social Media / Web Content Management with WordPress

1 Class Hour 2 Lab Hours 2 Quarter Credit Hours

This ten-week, two-subject course will be required for students who graduated with a pre-October 2013 GMW AS degree with a concentration in Graphic Design and thus did not yet take the Special Topics (Social Media) and Web Content Management with WordPress courses.

GMW 300 Web Animation

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisites: GMW 110, GMW 112, GMW 123

This course presents the newest technologies in animation for the web. The introduction of HTML 5 and Cascading Style Sheet transitions has changed the way developers deploy animation for the web. During the course, students learn how to optimize animation for various web browsers, ePub, and platforms including mobile device delivery and the inclusion of animation into content management portfolios.

GMW 301 3D Modeling

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisites: GMW 102, GMW 112

In this course, students will render conceptual designs using 3D modeling software. Students will create their own models using both polygonal and subpatch techniques. Models

will then be textured in a realistic or stylized manner based on the individual student's design aesthetic. Projects will be rendered and optimized for both print and web deployment. Final renderings will be further enhanced and manipulated using post-production software such as Photoshop, Illustrator, or InDesign.

GMW 302 Concept Development

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: GMW 102, GMW 112, GMW 141, GMW 201,
GMW 223, EN 102

In this course, students will conceive of a variety of possible solutions from a menu of given contemporary problems of varying complexities. They will learn first to (raw) sketch by hand not one but several possible solutions exploring the pros and cons of each solution based on individual web-based research and understanding of the respective design challenge. Students will be asked to employ hand-drawn sketches reflecting their uniquely imaginative capabilities, and to move to software applications (Photoshop, Illustrator, tablets) for further development as their ideas come into focus.

GMW 310 Digital Editing I

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisites: GMW 100, GMW 112, GMW 123

Using Adobe Premiere Pro, students will learn the technical and creative aspects of non-linear video and audio desktop editing. The course is designed to introduce students to learning the fundamental methods, techniques and disciplines necessary to edit video, audio and other digital media into a short video program, using DSLR cameras and desktop editing software. Creative aspects of editing and working with still and moving images will be executed by students in the lab.

GMW 311 Motion Graphics I

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisites: GMW 102, GMW 112, GMW 201, GMW 301
Co-requisite: GMW 312

This course focuses on trending technologies in motion graphics. Students will utilize Adobe After Effects and Cinema 4D as tools to produce high definition motion graphics. Students will experiment with the principles of animation to add character to inanimate objects using keyframing techniques. Course assignments will be focused on creating a variety of motion graphics such as title sequences, parallax photographs, and animated corporate identities.

GMW 312 Motion Graphics Design

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: GMW 102, GMW 112, GMW 201,
GMW 301
Co-requisite: GMW 311

This course focuses on the different categories and design

aesthetics used in the motion graphics industry. GWM 312 covers a brief history of animation from its early inception as Victorian era entertainment devices up to modern computer techniques. Students will be introduced to key artists during these eras. Principles of animation such as squash and anticipation will be analyzed in hand-drawn cartoons as well as computer-generated works. Students will design animations from storyboard previsualization to production fulfillment. This course will also explain the differences in compression algorithms for digital movie delivery. Other topics, such as chroma keying for visual effects and motion tracking will also be covered.

GMW 320 Digital Editing II
2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: GMW 310
Co-requisite: GMW 321
This course continues beyond the fundamentals of Digital Editing I by putting an emphasis on developing, scheduling, and producing web videos in support of web marketing, mobile delivery, and associated e-commerce messaging and promotion. Students will develop concepts and storyboards to meet a set schedule and shoot and edit various video and audio content to meet specific marketing requirements.

GMW 321 Motion Graphics II
2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisites: GMW 311, GMW 312
Building on GMW 311 Motion Graphics I, students will continue the use of production software to enhance motion graphics creativity. This course will focus on video compositing and effects. Students will shoot their own HD video footage using SLR cameras, then enhance that footage using Adobe After Effects. Students will then apply effects such as 3D motion tracking to add computer-generated elements to the video. Green screen backdrops will also be employed to allow students to chroma key video elements and composite them onto various backdrops. Other topics such as rotoscoping and masking will be covered.

GMW 322 Typography II
2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: GMW 201, GMW 232
Typography II explores the creative use of typography for enhanced logo and page layout design, font development, and esthetic support of message delivery. Typographic options for animation, responsive mobile delivery, and e-publishing distribution will be emphasized.

GMW 400 Digital Publishing III
2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisites: GMW 232 (or GMW 290), GMW 322
Co-requisite: GMW 402
This course is an advanced study of Digital Publishing with a concentration on digital documents and ePub construction. Focus will be placed on current industry standards and development of e-publications utilizing software used in the design and ePub industries.

GMW 401 Brand Strategy and Marketing
2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: GMW 129, GMW 302
Co-requisite: GMW 402
This course is a study of packaging brand strategies and defining marketing tactics to support product, packaging, promotion, pricing, and distribution objectives for consumer products. Students will examine current trends and innovations in a variety of markets. Emphasis will be placed on developing integrated brand designs to meet marketing objectives with a focus on package design.

GMW 402 Package Design II
2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: GMW 102, GMW 201, GMW 232
Co-requisite: GMW 401
This course focuses on an advanced approach to packaging and brand design for achieving packaging business objectives. Students will examine current trends and innovations in a variety of package designs. Students will design 3D packaging products to represent their brand and various corporate packaging strategies defining specific packaging tactics. Final packaging designs will also be simulated on computer-generated 3D product models.

GMW 410 Responsive Web Design Technology
3 Class Hours 1 Lab Hour 4 Quarter Credit Hours
Prerequisites: GMW 112, GMW 122 (or SE 122), GMW 302, GMW 401
This course addresses the importance of creating UI/UX design solutions that work for both desktop and mobile delivery. Students will learn how to design a "responsive" web experience for desktop, smartphone, and tablet devices. Students will learn the user interface patterns and behaviors of competing operating systems and devices to create design layouts for these varying delivery systems. Students will explore the more advanced features of HTML 5 and CSS3 to further enhance their projects.

GMW 411 Project Management
2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: GMW 302
Project management is a growing field used increasingly by businesses of all sizes. As entrepreneurs and company executives deal with the daily responsibilities of managing an organization, it is important to use dedicated project managers to oversee projects from conception to completion. Students will work in teams to develop a comprehensive project plan and address all the key areas in the project management cycle.

GMW 412 Social Media Marketing
2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: GMW 401, GMW 251
This continually-adaptive dynamic course will cover methods and trends used by various social media in support of branded marketing, and social media's critical use in the e-commerce marketing mix.

GMW 420 Content Management Systems II
4 Class Hours 2 Lab Hours 5 Quarter Credit Hours
Prerequisite: GMW 215 or GMW 291
Co-requisite: GMW 421
This course expands on the knowledge gained in GMW 215 Web Content Management with WordPress with a brief review of "Child Themes" and takes web development to the next level with the design of custom templates using Adobe Photoshop and CSS. Custom templates allow developers to create truly one-of-a-kind website designs while utilizing the flexibility and endless resources of a WordPress content management system. This course will also cover the importance of responsive design to add functionality to accommodate the need for mobile device delivery.

GMW 421 Senior Portfolio
2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: GMW 215 or GMW 291
Co-requisite: GMW 420
This course requires students to re-focus their attention back to their design portfolios that were originally created during the final quarter of their associate degree. The portfolio presentation will not only showcase their technical and creative skills, but also display their knowledge of social media marketing and public communication. The senior portfolio is the student's opportunity to examine the full scope of their work, and with the assistance of the Career Services Office, properly position them to begin their careers in design.

GMW 422 Special Topics or Coop Experience
3 Class Hours 1 Lab Hour 4 Quarter Credit Hours
This dynamic and adaptive course is reserved to cover vari-

ous changing or emerging technology trends and technology as they occur.

HISTORY (SOCIAL SCIENCES CORE)

HI 211 United States History I: 1600-1877
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 102
This course examines the most important international, political, economic, and social developments during key phases of U.S. history from 1600-1877. The course focuses on contexts of the two greatest political crises in American history: the tensions between American colonists and the British imperial government and the preservation of the Union and the dispute over slavery between the north and the south that culminated in the Civil War.

HI 231 Contemporary History
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 102
This course encourages students to explore economic, political, social and cultural developments throughout the world since World War II, particularly in developing nations including spiritual, scientific and intellectual developments.

HI 235 Architectural History
4 Class Hours 4 Quarter Credit Hours
This course is a study of the major periods and styles of architecture from Egyptian through postmodern. Styles studied will include Egyptian, Greek, Roman, early Christian, Byzantine, Romanesque, Gothic, Renaissance, Baroque, 18th, 19th and 20th century. Through a series of lectures, discussions, and readings, students will gain a fundamental understanding of the history of architecture including the historical and social context of each period respectively.

HI 280 The Holocaust
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 102
In this course, students will study genocide and mass murder in modern history. The focus of this course is the Jewish Holocaust of 1933-1945. Through film, photographs, and readings, the course will provide students with a basic understanding of the establishment of the Nazi Party and its attitudes, beliefs, and laws that were put into action during this time period. Students will compare the Holocaust to current genocidal acts in the world today, including the effects of genocide on society.

HI 311 The History of the American Family
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 331 or its equivalent
An examination of the American family and the historical changes it has experienced with particular focus on socialization, gender, and sexuality.

HEALTH INFORMATION MANAGEMENT/ELECTRONIC MEDICAL RECORDS

HIM 120 HIPAA and Patient Confidentiality
2 Class Hours 2 Quarter Credit Hours
Prerequisite: HS 102
Co-requisite: HIM 122
An overview of the Health Insurance Portability and Accountability Act (HIPAA) of 1996 will be presented. This course is geared towards the roles and responsibilities of the HIPAA officer. Topics will include standards for electronic transactions, electronic health record (EHR) privacy and security, patient rights, and protected health information.

HIM 122 Introduction to Electronic Health Records
2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: HS 102
Co-requisite: HIM 120
This is an introductory course that will provide an overview of the electronic health record (EHR). Topics will include terminology, prescription/medication management including e-prescribing, standard naming conventions, and discrete data fields as compared to scanning and patient disease registries. Practical hands-on experience in a computer lab setting will provide activities similar to what will be encountered in the workplace.

HIM 250 Comprehensive Health Information Management I
4 Class Hours 4 Quarter Credit Hours
Prerequisites: HIM 120, HIM 122
These course modules provide a comprehensive overview of the Health Information Management knowledge needed to perform at the specialist level. Topics will include healthcare delivery systems, transition and maintenance of EHRs in diverse medical office settings including regulatory compliance. Legal and ethical considerations will be presented and a preparation for the national CEHRS examination administered by the National Healthcareer Association will be included.

HIM 260 Comprehensive Health Information Management II
4 Class Hours 4 Quarter Credit Hours
Prerequisite: HIM 250
These course modules provide a comprehensive overview of the HIT, EHR, and HIE knowledge needed to perform at the technician level. The legal and regulatory aspects, the migration path, and change management for these areas will be covered. There is a primary focus on data management, patient safety, CPOE, e-Rx, BC-MAR, PHRs and care coordination, interoperability, clinical decision support, and electronic document management for EHR systems. Meaningful Use will be presented and a preparation for the national CPEHR examination administered by Health IT Certification will be included.

HIM 262 Internship
10 Lab Hours 2 Quarter Credit Hours
Prerequisite: HIM 250
Co-requisite: HIM 260
This EMR internship will allow students to develop the basic knowledge, skills, and professional practices introduced in the EMR curriculum through hands-on experience in a medical office environment. Students will be expected to perform procedures established by current EMR guidelines and professional standards.

HEALTH SCIENCES

HS 102 Introduction to Allied Health
2 Class Hours 2 Quarter Credit Hours
This course introduces students to the allied health professions offered at New England Institute of Technology. The course covers topics generic to health care professionals, including basic skills, language and professional roles and responsibilities.

HS 110 Applied Medical Terminology
2 Lab Hours 1 Quarter Credit Hour
This course provides students with medical language necessary for health professionals. Case studies will allow students to apply medical terminology using a systems approach.

HS 120 Medical Terminology I
1 Class Hour 1 Quarter Credit Hour
This is the first of a two-part course which is targeted for students majoring in Health Sciences and is designed to complement other required courses, particularly anatomy, physiology, and pathophysiology. Students will develop basic medical language skills through a study of root words, prefixes, and suffixes while focusing on the correct pronunciation, spelling, and use of such terms. Learning a new language requires memorization, repetition, and other pertinent skills that build on vo-

cabulary and other knowledge retained from relative courses. The course is comprehensive in nature and, consequently, it is vital that students master each module before moving on.

HS 123 Medical Terminology II
1 Class Hour 1 Quarter Credit Hour

This is the second part of a two-part course that is targeted for students majoring in Health Sciences and is designed to complement other required courses, particularly anatomy, physiology, and pathophysiology. Students will develop basic medical language skills through a study of root words, prefixes, and suffixes while focusing on the correct pronunciation, spelling and use of such terms. Learning a new language requires memorization, repetition, and other pertinent skills that build on vocabulary and other knowledge retained from relative courses. The course is comprehensive in nature and, consequently, it is vital that students master each module before moving on.

HS 201 Introduction to Medical Ethics and Bioethics
3 Class Hours 3 Quarter Credit Hours

This course is designed for the allied health student who has not been exposed to formal medical ethics or bioethics theory. Purposely broad in nature, it introduces students to important medical ethical issues pertaining to the health care professions such as confidentiality, informed consent, euthanasia, abortion, genetic engineering, and organ allocation. A unique aspect of this course is the focus on current bioethical issues in the news. Topic selection will be driven by current issues in bioethics affecting the healthcare provider as well as the public at large.

HUMANITIES (HUMANITIES CORE)

HU 207 Introduction to Literature
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 102

This course is a survey of short fiction, poetry, and drama. Through interpreting literature, students become more insightful readers of texts and the world around them. Lively class discussion helps students understand important elements of life, such as self and society, love and hate, and peace and war. Evaluation is based on class participation and short writing assignments.

HU 208 Rap/Rock and Poetry
4 Class Hours 4 Quarter Credit Hours
Core Fulfillment: Both Communications Core and Humanities Core
Prerequisite: EN 102

What do Eminem, Tupac, Bob Marley, Bob Dylan and WB Yeats have in common? All five wordsmiths are poets who use rhyme, rhythm, figurative language and poetic structure to craft language. In this course, students will explore poetic devices and important global themes through examination of poetry, written by Nobel Prize and Grammy Award winning writers. Focusing on aspects of poetic form will build students' understanding of and appreciation for the power of language.

HU 211 Introduction to Film
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 102

The focus of the course will be on what goes into the reading and analysis of a film. Film is comprised of several arts – and the objective of this course is to learn to appreciate films and to see them as important social documents that tell us much about ourselves and our world.

HU 212 Documentary Film
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 102

This course will expose students to the techniques and artistry of making interesting non-fiction films. Students will view and analyze significant documentary films and become familiar with the work of important filmmakers.

HU 215 Popular Culture
4 Class Hours 4 Quarter Credit Hours

This course will analyze cultural expressions of intellectual and social trends since 1950. Students will investigate literature, comics, movies, television, music, advertising, painting, computer games, and the Internet to probe the forces that shape our world. In this course, students will identify and evaluate the popular entertainment we consume and ask how our choices define us and shape our values. Understanding our values and culture enables us to understand why we buy what we buy, why we do what we do, and why we think the way we do.

HU 216 Music and the Media
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 102

This course will trace the long relationship between visual media and music. Students will study the movie industry from silent movies to the sound tracks that are an integral part of the movies of today. They will also study the importance of music in television, radio and the recording industry, particularly its role in commercials and the "selling" of products, people and programming. In addition, a substantial portion of the course will be devoted to the technology that has led to today's sophisticated performances and recording techniques.

HU 240 Graphic Design in the 20th Century
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 102

Throughout history, artists and designers have created visual works that help to define historical eras. In this course, students will examine and analyze the most prominent design styles of the past one hundred years. They will learn the defining features and major proponents of each style as well as how each style fits within its historical context. They will then use the knowledge gained to produce designs that respond to past styles in an engaged, knowledgeable way. Course performance will be evaluated on student effort and growth as opposed to artistic talent.

HU 242 The Automobile and American Culture
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 102

Undeniably, the automobile has had an enormous impact on American culture. A majority of Americans rely on individual transportation daily, but the car is more than a means of heading to work. Automobiles impact our personal independence, our choice of employment, the country and world economies, the environment, and our social culture. The Automobile and American Culture is a course designed to study the broad impact that the automobile has and continues to have on our nation and the world. Students will examine the automobile through historical documents, films, photographs, and music.

HU 243 The American Dream
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 102

This course explores the theme of work and identity by raising questions about who we are in relationship to our work and to the society in which we live: Who am I? What do I want? What is my place in the world and my status within it? Am I useful? Am I fulfilled? Can I change my circumstances? The readings for the course consist of contemporary short stories and short personal narratives in which different people talk about their jobs. Through the lens of fiction and non-fiction, students will begin to understand how literature relates to the everyday workplace and to our pursuit of the "American Dream."

HU 244 Science Fiction
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 102

Isaac Asimov called science fiction "the literature of change." The course will analyze films, short stories, and a classic science fiction novel to understand the ways this popular genre

entertains us and gives us insight into the impact science and technology has had on us.

HU 250 Cribs: The American Home
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 102
This course explores the American home in an interdisciplinary way. Our focus is the history of the twentieth-century home that incorporates a discussion of the social and cultural aspects of domestic space. As part of this analysis, students will explore humanities texts, such as photography and film. In addition to providing students with a basic understanding of domestic history (i.e., when and why did suburbs begin?), they will be prompted to ask other questions (i.e., what forces have excluded some Americans from that suburban way of life?). Students are encouraged to think about the American home as much more than four walls and a roof. It defines who we are... and it determines how we define others.

HU 291 Critical Thinking and Chess
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 102
This course teaches critical thinking and problem-solving skills by using the game of chess as an empirical model for evaluating situations, calculating risks, predicting the consequences of possible actions, solving problems efficiently, and investigating the benefits and limits of reasoning and creative play. Students will demonstrate those skills by solving a wide variety of tactical and strategic problems in chess, by writing a thoughtful analysis of the qualities necessary for a successful thinker/problem solver, and by applying those qualities to situations in one's personal life and career. Chess will be used as a model for critical thinking skills and life skills.

HU 311 The Art of Film
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 331 or its equivalent
This course is a survey of films that have significantly contributed to the development of film as an art and as an industry. Topics of discussion include filmmaking techniques and theories of criticism.

HU 313 World War II in Film
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 331
The Second World War has remained a great thematic source for today's filmmakers. This course will examine films made about World War II. After watching each film, students will analyze the way the films address such themes as patriotism, leadership, moral responsibility, heroism, cowardice, survival, comradeship, and readjustment to peacetime conditions. The films will also be analyzed through discussion, reading, research and writing, in terms of the contribution of these films

in developing a better understanding of current military conflicts.

HU 321 Representations of Gender
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 331 or its equivalent
HU 321 is an advanced course that analyzes portrayals of gender in both written and visual text including literature, film, and television to find patterns of meaning that illuminate human nature and society. Additionally, it will explore how gender intersects with other social constructs like race, ethnicity, and sexual orientation.

HU 331 Ethics and Technology
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 331 or its equivalent
This course will explore the basic concepts of ethical theories and ethical values and apply these to technologically-based dilemmas through case studies. These dilemmas will be considered in terms of their implications both for individuals, and for professionals involved in creating and maintaining technology, and mechanisms will be developed to guide ethical discussions and decision-making.

HU 341 World Religions
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 331 or its equivalent
In this course, students will examine religious practices surrounding life passages (birth, marriage, death), and the food, clothing, sacred calendars, sacred texts, and ethics of several major world religions.

HU 350 Literature and Health
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 331 or its equivalent
Through the study of fiction and poetry, students broaden their understanding of two important perspectives in healthcare — that of patient and caregiver. With the ultimate goal of engendering empathy for both parties, this course requires students to read a variety of literary texts that address the social, cultural, psychological, familial, institutional, and professional dimensions of healthcare. Course requirements include close reading, lively class discussion, short oral presentations, original research, and thoughtful writing.

HU 352 History of Rock and Roll
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 102
This course will trace the various musical forms and technological advances that have led to the American popular music of today. Particular emphasis will be given to blues and jazz and their influence on early rock and roll. In addition, a substantial portion of the course will be devoted to the technology

that has led to today's sophisticated performance and recording techniques. Students will also experience some hands-on musical activities with instruments such as the guitar and keyboard that are vital components of today's music.

HU 432 History of Western Art
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 102
This course offers students the opportunity to explore the visual arts throughout Western history. Students will develop knowledge of artists and artistic development, and increase their ability to critically appreciate a wide range of art across media, styles, and time periods. The course will emphasize painting, and will additionally examine sculpture, architecture and photography, as time permits.

HU 433 Encountering 20th Century Art
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 102
Students will examine art produced in the 20th Century by exploring a variety of factors including: the differences in this art from what had come before; the role of the machine and technology in subject matter, technique and production; the major social movements and political events of the 20th Century and how they were represented in art; and the major movements in art in this century. Important works by major artists of this period will be studied, so that students can recognize these and similar works, and appreciate their place in popular culture. Students will learn to be comfortable with art and be able to "read" art for their own enjoyment. They will come to appreciate the notion that art, in the final analysis, is a creative expression of their world, their lives, what they see and feel and experience every day.

HU 441 World Literature
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 331 or its equivalent
As a result of globalization, we are interacting more often with people from other cultures. This course uses fiction, poetry, and drama from around the world to learn about other cultures.

INTERIOR DESIGN

ID 121 Interior Building Systems
2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: ABT 112, ABT 115
This course is an introduction to building systems and construction materials relevant to the interior design profession. Topics covered will include wall, ceiling, and floor systems, cabinets, countertops, finish carpentry, stair systems, and associated materials. Also included is an overview of plumbing,

heating, air conditioning, and electrical systems and their impact on interior layouts. Case studies of residential and commercial projects will be presented and analyzed.

ID 132 Interior Design Studio I – Residential

2 Class Hours 6 Lab Hours 5 Quarter Credit Hours
Prerequisites: ID 121, ABT 122

In this course, students will explore and apply interior design theory and techniques by solving an assigned interior design problem from programmatic format through design development. Problem emphasis will be on residential interiors. Topics will include theory of design, program resolution, concept formulation, selection of finishes, lighting, existing conditions, project documentation, investigation of existing conditions, building codes, and the role of the client. Students will make a graphic and verbal presentation representing their solution to a jury of critics at the end of the quarter.

ID 134 Color and Composition

3 Class Hours 3 Quarter Credit Hours
Prerequisite: ABT 110

This course will introduce students to the theory and technical properties of color relative to composition and light. Through assigned vignettes and projects, students will explore the functions of color and its use to create desired human response and comfort, perceptions, form and space.

ID 212 Programming

2 Class Hours 2 Quarter Credit Hours
Prerequisite: ABT 110

This course introduces students to the concepts and theory of building programming. Topics will include client objectives, collection, organization, and analysis of facts, evaluation of alternative concepts, determination of space requirements, and the final problem statement.

ID 225 History of Interior Design I

3 Class Hours 3 Quarter Credit Hours
Prerequisite: ABT 110

This course is a survey of the history of interior design from ancient Egypt to the end of the 19th century. Topics will include interior design styles and furniture and furnishings of each major era. The focus of study will be on the major styles of interior design and furniture, understanding the social climate that formed them, and the relationship to present-day context.

ID 226 Finishes & Materials I

3 Class Hours 3 Quarter Credit Hours
Prerequisite: ID 121

This course is an introduction to finishes and materials typically specified for the residential interiors. Topics include wall and floor finish materials, paint and coatings, acoustical treatments, fibers and textiles, and criteria used for their selection.

ID 228 Interior Design Studio II – Retail

2 Class Hours 6 Lab Hours 5 Quarter Credit Hours
Prerequisites: ID 132, ID 212

In this course, students will explore and apply interior design theory and techniques by solving an assigned interior design problem from programmatic format through design development. Problem emphasis will be on commercial interiors in the retail sector. Topics will include theory of design, program resolution, concept formulation, selection of finishes, lighting, fixture selection, existing conditions, sales psychology, project documentation, investigation of existing conditions, building codes, and client programming and image. Students will make a graphic and verbal presentation representing their solution to a jury of critics at the end of the quarter.

ID 232 Professional Practice for Interior Designers

3 Class Hours 3 Quarter Credit Hours
Prerequisite: ID 132

This course provides students with an overview of the general practice of interior design. Topics will include office organization, project coordination, legal requirements, contractual agreements, consultants, and fee structures. Discussions pertaining to professional development, personal goals, and career options are also included.

ID 233 Computer Graphics & Applications

3 Class Hours 3 Quarter Credit Hours

This course will introduce students to advanced computer programs typical to the profession and their application. Topics will include spreadsheets, graphics, and business programs.

ID 234 Portfolio Review

1 Class Hour 1 Quarter Credit Hour
Prerequisite: ID 228

In this course, students will develop a professional portfolio of their work. Quality shall be suitable to the interview process. Along with weekly development critiques from the instructor, students will make a final presentation at the end of the quarter.

ID 235 Interior Design Studio III – Office

2 Class Hours 6 Lab Hours 5 Quarter Credit Hours
Prerequisites: ID 132, ID 212

In this course, students will explore and apply interior design theory and techniques by solving an assigned interior design problem from programmatic format through design development. Problem emphasis will be on commercial interiors in the office sector. Topics will include theory of design, program resolution, concept formulation, psychology of the business environment, selection of finishes, lighting, fixture selection, existing conditions, project documentation, investigation of

existing conditions, building codes, and client programming and image. Students will make a graphic and verbal presentation representing their solution to a jury of critics at the end of the quarter.

ID 313 Finishes & Materials II

3 Class Hours 3 Quarter Credit Hours
Prerequisite: ID 226

This course is an introduction to finishes and materials typically specified for the commercial interiors. Topics include wall and floor finish materials, paints and coatings, acoustical treatments, fibers and textiles. Particular attention will be given to codes relating to finish materials, the criteria for selecting different materials, typical installation methods and professional specification of materials.

ID 314 History of Interior Design II

3 Class Hours 3 Quarter Credit Hours
Prerequisite: ID 225

This course is a continuation of ID 225 History of Interior Design I, covering the end of the 19th century through present day. Topics will include the interior design styles, furniture and furnishings of each style period including present and future trends. Students will be introduced in detail to the "modern period" of furniture design including examining systems furniture in the office environment and other specialized systems.

ID 315 Interior Construction Documents

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: ID 132, ABT 124, ABT 218, ABT 236

In this course, students will be introduced to the process of preparing construction documents for interiors projects. The focus will be on the application of analytical methods and technical concepts developed throughout the curriculum. Topics covered will include building systems, building materials, finishes and working drawings.

ID 320 Interior Design Studio IV – Space Planning

2 Class Hours 6 Lab Hours 5 Quarter Credit Hours
Prerequisite: ID 235

Students will develop a fluent approach to allocating space through a series of design problems. Strategies based on existing conditions, geometric organization, circulation and furnishing patterns, code requirements, adjacency requirements, public vs. private space, and enclosed vs. open design will be explored.

ID 322 Textiles

3 Class Hours 3 Quarter Credit Hours
Prerequisite: ID 226

This course examines the science of textiles and their applications in the built environment. Topics will include textile en-

gineering, coloring, printing, finishes, and properties of both man-made and natural fabrics. Additional topics will include quality, costs, performance, and regulatory compliance.

ID 324 Advanced Lighting
3 Class Hours 3 Quarter Credit Hours
Prerequisite: ABT 421
This course expands upon the theory, criteria, and techniques studied in ABT 421. Emphasis will be on lighting design, selection of interior lighting systems, and computerized software programs applicable to lighting design. Students will apply theories and techniques by executing solutions for assigned problems.

ID 330 Interior Design Studio V – Hospitality
2 Class Hours 6 Lab Hours 5 Quarter Credit Hours
Prerequisite: ID 320
In this course, students will explore and apply interior design theory and techniques by solving an assigned interior design problem from programmatic format through design development. Problem emphasis will be on the hospitality sector. Topics will include theory of design, program resolution, concept formulation, psychology of the hotel and restaurant environments, selection of finishes, lighting, fixture selection, project documentation, investigation of existing conditions, building codes, and client programming and image. Students will make a graphic and verbal presentation representing their solution to a jury of critics at the end of the quarter.

ID 331 Furniture, Fixtures, & Equipment
3 Class Hours 3 Quarter Credit Hours
Prerequisite: ID 315
The course develops the student's knowledge of the categories of furniture including ready-made, custom-designed, and built-in. Furniture types including seating, tables, workstations, storage, beds and systems furniture, selection criteria, materials, construction methods and standards will be discussed.

ID 410 Interior Design Studio VI – Institutional
2 Class Hours 6 Lab Hours 5 Quarter Credit Hours
Prerequisite: ID 320
In this course, students will explore and apply interior design theory and techniques by solving an assigned interior design problem from programmatic format through design development. Problem emphasis will be on institutional sector. Topics will include theory of design, program resolution, concept formulation, psychology of the environment, selection of finishes, lighting, fixture selection, project documentation, investigation of existing conditions, building codes, and client programming. Students will make a graphic and verbal presentation representing their solution to a jury of critics at the end of the quarter.

ID 420 Project Estimating & Scheduling
2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: ID 315, MA 125
In this course, students study the estimating procedures and principles used to determine detailed cost estimates in the construction bidding process. The emphasis will be on residential and light commercial construction. Topics covered will include the organization, classification, and quantity surveys of materials and labor costs, subcontracted work, overhead and profit, and project scheduling.

ID 421 Portfolio Review
2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: ID 320, ID 330, ID 410
In this course, students will develop a professional portfolio of their junior and senior level work. Quality shall be suitable to the interview process. Along with weekly development critiques from the instructor, students will make a final presentation at the end of the quarter to a review committee of faculty members.

ID 430 Interior Design Studio VII – Senior Thesis
2 Class Hours 6 Lab Hours 5 Quarter Credit Hours
Prerequisite: ABT 423
This is a direct studies course in which students must demonstrate to the department faculty, their understanding of and ability to utilize and synthesis the technical and design concepts they have developed throughout their college experience. Prior to the commencement of the quarter, students will submit, in proposal format through ABT 423, a project for review and approval by the faculty. Students will work independently with weekly interaction with a faculty advisor. The quarter will culminate with a formal presentation to a jury of faculty and critics.

ID 431 Professional Issues in Interior Design
3 Class Hours 3 Quarter Credit Hours
Prerequisite: ID 235
A survey course of current topics in the interior design profession.

INFORMATION TECHNOLOGY

IT 111 Introduction to Information Technology
2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
The basic concepts of computer hardware and systems are presented as tools used to provide services and solve problems in businesses. Additionally, students will be exposed to various operating systems that are popular in business, and will learn to use office suite applications; word processing, spreadsheet, and presentation.

IT 121 IT Visual Communications
2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Visual communication is often more effective than written or spoken communication. Like other forms of communicating, visual communication has its own set of rules, slang and conventions. The goal of this course is to teach students about the fundamentals of effectively organizing and communicating ideas through graphics. Among the topics addressed in this course are the logical organization of information, presentation skills, with the use of industry standard desktop publishing and digital imaging applications.

IT 260 Internship
15 Field Hours 3 Quarter Credit Hours
Prerequisite: Requires Department Chair approval
Students will gain practical experience through work experience at a local company within an Information Technology department or industry. Students will use the knowledge through previous coursework in his/her program to work in an entry-level position within a programming or networking environment.

IT 265 Introduction to Information Security
2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
This course provides a broad overview to the field of information security. The course covers history, terminology and strategies involved in securing information assets and serves as a foundation course for more advanced studies in information, network, and computer security. General and specific threats to information assets and defensive strategies for protecting those assets are covered. The course employs an integrated system of skill-building lessons, hands-on exercises, and self-assessment tools.

IT 267 IT Ethics and Professional Development
3 Class Hours 3 Quarter Credit Hours
The course will cover the development and need for issues regarding social, legal, privacy and the application of computer ethics to information technology. This course offers extensive and topical coverage of issues such as file sharing, infringement of intellectual property, security risks, Internet crime, identity theft, employee surveillance, privacy, and compliance. Students will gain a foundation in ethical decision-making for current and future business managers and IT professionals. In addition, students will be exposed to approaches that effective people take to attain fulfillment and learn to methods to build their character and shape their life more deliberately.

IT 374 IT Project Management

3 Class Hours 3 Quarter Credit Hours

Students will learn what is involved in becoming a successful project manager. The course covers the foundations of IT project management: project integration, scope, time, cost, quality, human resources, communications, risk and procurement and will include case studies of multiple projects, both successful and failed.

IT 375 Information Systems Management

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisite: IT 111 or MGM 111

This course provides students with an overview to the field of information technology. Course topics include an introduction to how information systems are used in organizations; hardware and software; organizing data and information; telecommunications, the Internet, intranets and extranets; electronic commerce and transaction processing systems; information and decision support systems; specialized information systems; systems development; and security, privacy, and ethical issues in information systems and the Internet.

IT 378 Database Management

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: NE 121

Students will learn to administer a major DBMS such as Oracle or SQL Server. At the end of the course, students will be able to assume the role of a DBA in performing tasks such as installation of the DBMS, user management, backing up and restoring databases, replication, maintaining high availability, performance monitoring, automating administrative tasks and database security.

IT 415 Cooperative Learning I

18 Field Hours 6 Quarter Credit Hours
Prerequisite: Requires Department Chair Approval

Students will use the knowledge gained through previous coursework in their program with mostly paid, planned and supervised work experiences in the public or private sector. The course allows students to enhance the practical skills necessary for success by being exposed to the reality of the world of work beyond the boundaries of the campus, enhancing their self-confidence and career direction.

IT 425 Cooperative Learning II

21 Field Hours 7 Quarter Credit Hours
Prerequisites: Requires Department Chair approval and IT 415

This course allows students to continue and expand on the experiences started in the IT 415 course. Here, hopefully in the same public or private sector organization, students increase the scope and depth of their real world technical experiences.

IT 502 Data Warehousing and Data Analytics

4 Class Hours 4 Quarter Credit Hours

This course will build upon the student's database knowledge by examining data warehousing and data mining techniques. This course will examine database architecture and implementation necessary to enable corporations to maximize their investment within their business intelligence departments. Students will compare and contrast product offerings from major vendors as well as analyze case studies of organizations using these technologies to drive their business. Students will also gain experience with the latest tools and techniques through a series of hands-on exercises.

IT 504 IT Finance

4 Class Hours 4 Quarter Credit Hours

Students will examine key financial accounting principles and describe the purpose and structure of financial statements and the terms and principles used to create them. An analysis of financial statements using profitability, liquidity, debt, asset activity, and market value ratios will be covered to show how informed financial decisions are made about a company. Also, students will learn the concepts of the time value of money and will be introduced to the basics of capital budgeting and how to make long-term financing decisions by analyzing IT capital expenditures. In addition, the course will cover short-term financing decisions such as managing cash and inventory.

IT 512 Network Infrastructure and Design

4 Class Hours 4 Quarter Credit Hours

The course will enhance and build upon the student's knowledge of networking. By examining the network infrastructure from the perspective of the customer's needs and goals, students will learn the practical aspects of network design. Students will learn how to characterize, classify and interpret existing networks and traffic, and how those characteristics are impacted by logical network design and physical network design. Students will discover the appropriate methodologies and acumen for examining the technologies and devices needed for a campus network and an enterprise network.

IT 514 IT Leadership

4 Class Hours 4 Quarter Credit Hours

This course in leadership is intended to provide one of the essential skills required to become an IT manager at any level. Leadership is about making things happen, creating change, with a deep understanding of the context and who you are as an individual. This course aims to increase knowledge and skills related to catalyzing action, including how to make sense of context, using power and influence, building momentum for change, and developing leadership capabilities in others. Students will also examine the complexities and challenges of IT leaders in large, medium, and small business enterprises to gain an overall understanding of how the information technology function supports and impacts the business as a whole and to develop skills used to effectively influence managers outside of the IT function. Students will also develop their communications, critical thinking, and presentation skills.

IT 522 Software Architecture and User Interface Design

4 Class Hours 4 Quarter Credit Hours

This course reviews some of the most successful strategies for building a software system, including data-flow, data-centered, hierarchical, component-based and distributed architectures. Students will gain a thorough understanding of software components, connectors and configurations and learn how to apply user interface design principles for developing systems that are intuitive and meet the client's requirements.

IT 524 Information Systems Security

4 Class Hours 4 Quarter Credit Hours
Prerequisite: IT 512

Students in this course will get a high-level overview of the information security topics for which today's corporations need competencies. Essential security topics in this course cover network fundamentals and applications, standards, privilege management, environmental security issues, defense in depth, risk management, vulnerability assessments, business continuity planning, security policies, incident handling, web application security, and advanced persistent threats.

IT 532 IT Project Management

4 Class Hours 4 Quarter Credit Hours

Project management is more than merely parceling out work assignments to individuals and hoping that they will somehow accomplish a desired result. In fact, projects that could have been successful often fail because of such take-it- for-granted approaches. Individuals need hard information and real skills to work successfully in a project environment and to accomplish project objectives. Topics include project management life cycle and process; identifying and selecting projects; developing a project proposal; techniques for planning, scheduling, resource assignment, budgeting, and controlling project performance; project risks; project manager responsibilities and skills; project team development and effectiveness; project communication and documentation; and project management organizational structures. The concepts in the course support the project management knowledge areas of the Project Management Institute's A Guide to the Project Management Body of Knowledge (PMBOK® Guide).

IT 534 Information Technology and the Law
4 Class Hours 4 Quarter Credit Hours
Prerequisite: IT 514

This course is designed to provide a broad-based analysis of the legal issues confronted in today's information technology (IT) arena. It provides a foundation of the basic intellectual property concepts upon which IT activities and transactions are based. Such transactions include the licensing of software or information resources, the outsourcing or hosting of services or information, and development of software or websites. It also examines the challenges posed by e-commerce. Existing and pending laws and regulations impacting the use of IT systems, including electronic privacy and security mandates and the use of electronic signatures are also addressed. Finally, the course examines potential liabilities based on the operation of IT systems, including Internet-based problems (e.g., hacking, denial of service, cyber-torts), domain name/trademark issues, and intellectual property concerns.

IT 544 Cloud Computing
4 Class Hours 4 Quarter Credit Hours
Prerequisite: IT 512

This course provides students with a detailed exploration of the cloud-computing paradigm. After studying cloud architecture, students will study the strategic, risk and financial impact of utilizing this platform. Pertinent topics also include design, implementation and security aspects of applications stored in the cloud. The class will cover the entire spectrum of moving applications into the cloud.

IT 546 Ethics
4 Class Hours 4 Quarter Credit Hours

As future managers and leaders in the information technology field, students will be confronted by many challenging ethical decisions where the correct decision is not clear or may not even exist. This course aims to increase the student's awareness of the implications of the digitization of data, information, and communications on organizations and society and provide a strong foundation in professional ethics. Topics include but are not limited to globalization, outsourcing and ethical issues such as information privacy, accessibility, property, disclosure and accuracy. Students will be given case studies and ethical scenarios where the decision making process is as important as the final decision students reach.

IT 556 Master's Project
5 Class Hours 5 Quarter Credit Hours

This course focuses on the design and management of an IT infrastructure that aims to support: 1) the enterprise's structure, core processes, and relationships with external entities such as customers, suppliers, and outsourcers; 2) the IS function and its role in marshalling information technologies and information assets to support the strategy of the organization, and 3) the information technology architecture consisting of the organization's networks, hardware, data, and applications. Students will learn how to integrate and synthesize these three aspects of the enterprise, how IT must be aligned with the strategy of the organization, and how to make appropriate choices about architecture in relationship to overall organization goals.

JAPANESE (ARTS/FOREIGN LANGUAGE CORE)

JP 201 Introduction to Japanese
4 Class Hours 4 Quarter Credit Hours

Students will be introduced to the basics of Japanese, (speaking, listening, reading, and writing) with an emphasis on comprehension and speaking. Vocabulary used in everyday communication in the workplace, school, and common social situations will be covered. Contemporary Japanese society will be addressed in class discussions and video presentations including, but not limited to art, education, film (in particular animé), food, literature, music, sports, and technology. Japanese technological invention and know-how, as well as the unique challenges of doing business with the Japanese will be studied. Japanese guest speakers will be invited to share their expertise and experiences.

MATHEMATICS (MATH/SCIENCE CORE)

MA 070 Dosage Calculations
2 Class Hours 2 Quarter Credit Hours, which do not count toward degree requirements

This course is designed to assist in the understanding of the proper techniques needed to perform accurate dosage calculations in order to ensure patient safety. This course will focus on using critical thinking and quantitative reasoning methods to apply medical language and systems of measurement to successfully interpret drug orders and understand drug labels.

MA 100 Introduction to College Math with Lab
2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: Placement exam

Topics to be covered in this lab-based introductory algebra course include operations with signed numbers, rules for exponents, polynomial operations, solutions to linear equations in one variable, and several applications important to various technical areas.

MA 109 Math for Life Science
4 Class Hours 4 Quarter Credit Hours

This course is designed to assist in the understanding of the proper techniques needed to perform accurate dosage calculations; vital signs in order to ensure patient safety. This course will focus on developing the mathematical skills, critical thinking and quantitative reasoning methods needed to apply medical language and systems of measurement to solve problems in a variety of healthcare settings.

MA 110 Introduction to College Math
4 Class Hours 4 Quarter Credit Hours
Prerequisite: Placement exam

Topics to be covered in this introductory algebra course include operations with signed numbers, rules for exponents, polynomial operations, solutions to linear equations in one variable, and several applications important to various technical areas.

MA 121 Business Math
4 Class Hours 4 Quarter Credit Hours
Prerequisite: MA 100/110 or MA 109

This is an elementary applied course studying such business topics as interest rates, discounts, payrolls, markups, depreciation, insurance, mortgages, and basic statistics.

MA 125 Technical Math I
4 Class Hours 4 Quarter Credit Hours
Prerequisite: MA 100/110

Topics to be studied include the analytic geometry of a straight line, systems of linear equations, trigonometry, vectors and their applications, and quadratic equations.

MA 200 Applied Math for Business
4 Class Hours 4 Quarter Credit Hours
Prerequisite: MA 100/110

MA 200 is designed to help with the transition from basic algebra to more advanced business-related courses, such as statistics and finance. Applications will be stressed throughout the course. Specific topics include linear functions, quadratic functions, descriptive statistics, exponential functions, and annuities.

MA 210 Technical Math II
4 Class Hours 4 Quarter Credit Hours
Prerequisite: MA 125

The following four major topics and their applications will be studied: Cramer's Rule, exponential and logarithmic functions, trigonometry, and complex numbers.

MA 300 Statistics
4 Class Hours 4 Quarter Credit Hours
Prerequisite: MA 125 or MA 200

This introductory course stresses the use of statistics as a management tool for decision-making. The focus is on de-

scriptive statistics, communicating statistical data, concepts of probability distribution, estimation, and hypothesis testing.

MA 310 Calculus I

4 Class Hours 4 Quarter Credit Hours
Prerequisite: MA 210

Limits will be introduced and the derivatives and integrals of algebraic functions will be studied at length. Applications include rectilinear motion, curve sketching, maxima and minima problems, related rates, and area under a curve.

MA 315 Math for Game Developers

4 Class Hours 4 Quarter Credit Hours
Prerequisite: MA 310

Students will study the essential math necessary to become a successful game developer. Topics include vectors, matrices, transformations, collision detection, random numbers, rendering techniques and optimizations.

MA 320 Calculus II

4 Class Hours 4 Quarter Credit Hours
Prerequisite: MA 310

This continuation of Calculus I begins with derivatives of transcendental functions and proceeds with their integration. Additional topics include integration by parts, partial fractions, and numerical methods. Applications of the integral to area, volume, motion, and work will be stressed.

MECHANICAL ENGINEERING TECHNOLOGY

MCT 112 Introduction to Mechanical Engineering Technology

2 Class Hours 2 Quarter Credit Hours

This course is an introduction to engineering technology that gives an overview of the engineering profession with sample applications of the typical duties, tasks, and environment of the engineer and technologist today. The opportunities for and duties of various related engineering and technology specialists are illustrated. The future of engineering and technology is also discussed.

MCT 113 Design Principles

3 Class Hours 3 Quarter Credit Hours

Students are introduced to methods and procedures for design and product development. Basic principles and approaches to design are covered with emphasis on methods of concept generation, prototyping and testing, reverse engineering, and other different approaches used in product development. A design project is introduced that is carried through the curriculum and will be completed in Quarter VI in MCT 237 Design Project.

MCT 115 Computer-Aided Design I

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours

An introduction to computer design that utilizes a three-dimensional solid modeling software package that allows students to immediately create "solid" objects in virtual reality. Emphasis will be placed on design intent. Topics include 3D features, revolve, sweep, and lofted features, shell and coil features, orthographic drawing production, and assembly drawing.

MCT 124 Computer-Aided Design II

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisite: MCT 115

This course is a continuation of MCT 115 Computer-Aided Design I with an emphasis on the basic principles of mechanical drawing. Drafting topics include orthographic projection, basic dimensioning and tolerancing, sections, threads, 2D design layout, single auxiliary views, and assemblies. The essentials of 2D CAD will be covered along with additional 3D modeling topics.

MCT 125 Manufacturing Processes

4 Class Hours 4 Quarter Credit Hours

This course introduces the fundamentals of machine technology, with step-by-step analysis of how to turn materials into products. Topics include the traditional methods of material removal (machining operations and machine tools), material deformation (cutting, bending, forming, and rolling), sheet metalworking (stamping), joining (welding and fastening), casting, molding, forging, and conditioning.

MCT 130 Engineering Materials

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisite: MA 125

Material properties will be discussed as they apply to product design, manufacturing process design and control. Theories will be discussed in class and reinforced through lab problems.

MCT 134 Computer-Aided Design III

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisite: MCT 124

This course is a continuation of MCT 115 Computer-Aided Design I and MCT 124 Computer-Aided Design II with emphasis on design layout and intent utilizing a three-dimensional solid modeling software package. Projects will include advanced assemblies. Students will be provided a deeper understanding about presenting a design with presentation mode and animation.

MCT 136 Electricity/Electronics

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisite: MA 125

This course investigates basic electrical and electronics theory and provides an introduction of circuit analysis. It contains the following topics: electron theory, conductors and insulators, current and voltage, the properties of resistors, capacitors, and inductors, work and power, the principles of series circuit, parallel circuit and series-parallel circuits, and the concepts of capacitance and inductance.

MCT 212 Metrology

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: MCT 115, MA 125

The science of measurement in the manufacturing environment will be studied with emphasis on measurement methods, precision, and accuracy, tolerance control, standards, and inspection techniques. Economics and its relationship to measurement are covered. Both manual measurement techniques and automated techniques will be taught.

MCT 215 Statics

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisite: MA 210

The principles of statics as applied to design. The purpose of the course is to provide a clear and thorough presentation of the theory and application of mechanics. Topics include vector algebra, Newton's Laws of Motion, equilibrium of forces and moments, friction, centroids and moments of inertia. Laboratory assignments will support all the key topics.

MCT 224 Mechanics of Materials

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisites: MA 210, MCT 215

This course provides coverage of important topics in strength of material with an emphasis on application, problem solving, and design of structural members, mechanical devices, and systems. Study of the principles of the strength of materials is based on an understanding of the relationship between stress and strain associated with the application of compression, tension, torsional, shear, and bending forces. Laboratory exercises will support these concepts.

MCT 226 Electricity/Electronics II

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: MCT 136

This course builds on MCT 136 theory and practice by engaging students in practical applications. The coursework is geared toward building a System Response Project using sensors, actuators, semiconductor devices and microcontrollers.

MCT 233 Kinematics

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: MCT 134, MCT 215

Analysis of machine parts and linkages for proper design are presented. Topics include design of linkages, gear drives, belt and chain drives, and cams. The course also includes analysis of velocity, acceleration, and static and inertia forces in machines.

MCT 235 Automation

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisite: MA 210

This course focuses on the utilization of robotics, CNC, and automated controls for assembly and manufacturing processes. Levels of automation, as well as flexible and hard automation, open and closed loop control, Adaptec control and material handling will also be discussed.

MCT 237 Design Project

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisites: MCT 112, MCT 113, MCT 125, MCT 130, MCT 134, MCT 212, MCT 224

Students produce a design utilizing the knowledge gained from the principles covered in the design-related courses. Preparation for this course starts with MCT 113 Design Principles and is reinforced in subsequent courses. Students are required to submit electronic and paper documentation of their design and give a presentation explaining their approach to the design process.

MCT 239 Quality

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisite: MA 210

This course includes the organization, methodology and responsibility of quality assurance programs in manufacturing industries. Topics included are statistical analysis, control charts, process capability, cost of quality and other quality related topics.

MCT 240 Manufacturing Planning

4 Class Hours 4 Quarter Credit Hours
Prerequisite: MA 210

This course studies the concepts and techniques used to improve manufacturing performance in order to gain a competitive advantage. Topics include production planning, capacity planning, production control, master production scheduling, and forecasting.

MCT 314 Mechatronics

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisites: MCT 136, MCT 226, MCT 233, MCT 235, and MA 210

Mechatronics integrates mechanical, electrical/electronic, and computer/programming systems in the design of products. This course will allow students to apply mechatronics principles to the design, build, and testing of electromechanical systems, and demonstrate new products and devices.

MCT 317 CAD/CAM in Design and Manufacturing

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisites: MCT 124, MCT 125, MCT 134

Utilization of computer-aided manufacturing software with 3D solids modeling design capabilities to produce parts on computerized numerical control machines is presented. Topics include computerized generation of rapid prototypes and principles of reverse engineering.

MCT 322 Fluid Power

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisite: MA 210

This course covers the theory and practical use of fluid power and pneumatics. Topics include circuit diagrams, valves, cylinders, actuators, pumps, system losses, fluid logic and standards.

MCT 324 Design for Manufacture and Assembly

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisite: MCT 125

The principles of effective design for manufacture and assembly is applied to product design leading to simplified designs, reduced part counts, reduced assembly operations, and overall cost reductions without sacrificing quality. Topics include design for manual and automated assembly and design for assembly and handling by industrial robots.

MCT 336 Dynamics

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisites: MA 310, MCT 215

Dynamic forces, balancing, and the synthesis of mechanisms and motion will be discussed. This course provides an understanding of the theory and application of engineering mechanics. Topics will include kinematics of a particle, force and acceleration, work and energy, impulse and momentum, and rigid bodies. Theories will be discussed in class and reinforced through lab sessions.

MCT 416 Operations Management

4 Class Hours 4 Quarter Credit Hours

A management course specifically tailored for mechanical engineers that includes the principles of project management (CPM PERT, Gantt Charts), traditional management principles, total quality management (TQM), and materials management (Independent Demand vs. Dependent Demand).

MCT 418 Advanced Computer Applications

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours

An overview of computer applications and management information systems that are used in mechanical engineering is presented. Laboratory assignments emphasize mechanical engineering design applications.

MCT 420 Thermodynamics

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisites: MA 210, CHM 300

This course is a study of energy systems and the relationships between heat and work. Topics include the perfect gas laws, thermodynamic principles of boilers, turbines, internal combustion engines, and heating and refrigeration.

MCT 422 Manufacturing Processes II

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisites: MCT 125, MCT 130, MA 210

Advanced manufacturing process technology, management technology, and material technology will be discussed. Topics covered will be metal casting, powder metallurgy, bulk deformation processes, advance chip removal processes, nontraditional machining and thermal cutting processes, and processing of integrated circuits.

MCT 424 Design with Plastics

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisite: MCT 422

This course studies the design of plastic components. Properties of different resins are covered along with the unique characteristics of plastic as a design material. Design considerations relative to the different types of plastic processes are also covered along with tooling considerations and cost analysis. Design of products made of composite material is included.

MCT 425 Engineering Capstone Project Seminar

2 Class Hours 2 Quarter Credit Hours
Prerequisite: Completion of Quarters VII-X

An integration of the student's design and mechanical engineering education applied in a single analytical project. Students will be expected to present a formal proposal with a problem that is clearly identified followed by the development of a solution(s). Students will complete the project in MCT 451 Engineering Capstone Project.

MCT 431 Machine Design

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisite: MCT 233

Emphasis in this course is placed on machine design utilizing stress analysis, failure modes, and the integration of machine components to develop manufacturing processes appropriate to the raw material and the final product.

MCT 434 Heat Transfer

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisite: MCT 420

This course studies basic principles of heat transfer. Topics include steady and transient heat conduction, forced external

and internal convection, natural convection, heat exchangers, radiation heat transfer, and mass heat transfer.

MCT 451 Engineering Capstone Project

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: MCT 425

A course that provides students with an opportunity to investigate and undertake a project (typically calling for the design, development, and construction of a working prototype of a new product), that will utilize the knowledge and skills, acquired throughout the curriculum. The project is identified in MCT 425 Engineering Capstone Project Seminar. A formal presentation of the completed project is required.

BUSINESS MANAGEMENT

MGM 102 Word Processing

.5 Class Hour 1 Lab Hour 1 Quarter Credit Hour (5 Week Course)

Students are introduced to the concepts of word processing software. Topics include creating, editing, and formatting text files. Output consists of letters, memos and reports. An emphasis is put on file management to enable students to save and organize their work in this course and in others in a systematic fashion.

MGM 105 Effective Teams and Projects

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours

In this course, students learn and practice characteristics of high-performance/highly effective teams and valuing diversity on teams; understand and apply project and time management; learn and practice workplace professionalism; and learn and practice the concept of workplace coordination.

MGM 107 Introduction to Business

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours

This course provides an understanding of the functional areas of business and their related business processes and cycles, and careers in the functional areas. Students will also understand the history and major differences of e-business, and organizational stakeholders and stockholders and their impact on organizations. Students will complete a business simulation.

MGM 111 Workplace Technology

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours

Students will practice effective use and management of technology – software and hardware – used in MGT and in the workplace, and will learn and practice using NEIT's learning management software, work collaboration and sharing technology, file management including shared drives, record keeping, and electronic calendar. Through the use of office technol-

ogy and related workplace labs, students will develop basic workplace technology skills.

MGM 112 Introduction to Office Software

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours

This course is designed to give students basic to intermediate knowledge of e-mail, word processing, spreadsheet, and presentation software. Students are introduced to Canvas academic software as a repository for course materials as well as for grades and other resources. Additionally, an emphasis is put on file management to enable students to save and organize work in this course and in others in a systematic fashion.

MGM 115 Effective Management of Teams and Projects

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours

Students will understand the underlying concepts and the practices of effective teams and teamwork and effective project management. Students act as both team member and team leader, and develop their related skills on course projects. Students also develop and apply an understanding of how perception and attribution, diversity, interpersonal communication, conflict management, and the management process/cycle impact workplace teams and projects.

MGM 125 Principles of Management

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours

Students learn and apply the management cycle to course assignments and projects and develop an understanding of major differences between managing face-to-face and in virtual or e-business settings. Students complete and manage individual and team projects. The course also develops an understanding of the impact of organizational operations and decisions on various stakeholders.

MGM 130 Accounting Fundamentals

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours

This course introduces the accounting cycle, debits and credits, journals, and ledgers for a service business. Students learn accounting for general office records and the preparation of financial statements. Students use computerized accounting which reinforces the accounting cycle and accounting theory.

MGM 131 Introduction to Business Analysis and Reporting

1 Class Hour 4 Lab Hours 3 Quarter Credit Hours

Students learn and practice Excel spreadsheets and commonly used functions in businesses and organizations. Coursework focuses on Excel as a tool for business analysis.

MGM 143 Business Communication

1 Class Hour 4 Lab Hours 3 Quarter Credit Hours

Students practice written and oral communication skills and common business communications. Students learn common functions of Word and PowerPoint; assignments and exercises focus on Word and PowerPoint as software technology for business communication.

MGM 153 Workplace Relationships and Communication

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours

Students will examine the importance of and the various methods to develop effective relationships in the workplace. Particular emphasis is placed on recognizing your workplace style and the styles of others, successfully managing conflict, and applying the skills needed to communicate effectively in a variety of situations. Through various assignments and practical application, students will study and practice the communication process and effective communication, including editing skills, listening, and written, oral, non-verbal, team meeting, routine business communication, and presentations. Additionally, students will experience the impact communication has on workplace relationships.

MGM 157 Global Business

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours

This course introduces global business, global economy and financial reporting issues, importing and exporting, and international marketing. Students will understand the connection between technological advances, globalization, and e-business. Students will also consider cross-cultural attitudes and cultural competence, and their impact on management.

MGM 170 Business Accounting and Financial Reporting

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisite: MGM 130

Students learn and apply the accounting cycle to a retail business, including inventory and costs of goods sold, and understand and apply major accounting cycles – sales, receivables, purchasing, payables, and cash flow. Students use QuickBooks accounting software.

MGM 198 Management Practice Lab I

1 Class Hour 4 Lab Hours 3 Quarter Credit Hours

This course integrates and deepens students' learning through completion of experiential exercises and/or simulations that focus on team and project management, analysis and decision making, and Microsoft Office Suite technology.

MGM 211 Business Publishing

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: MGM 143

Students learn advanced features of Word and how to create basic desktop and web page publishing. Students also create common business documents and practice creation of shared/collaborative work projects.

MGM 214 Marketing Communications

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours

Students study and practice the marketing process and develop persuasive content for marketing communications. Students also learn the major differences between traditional and e/Internet marketing. Students practice marketing presentations.

MGM 215 Career Exploration & Planning

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours

Students will learn and understand their career interests, personal strengths and style, and the impact of e-business and social media on careers. Students will create a career plan that explores three possible career paths that will include a 3 to 5 year career plan, and will begin to develop a recruiting portfolio and practice related presentations. Students will understand and apply concepts of 21st century career management to their career plan.

MGM 225 Leading Teams and Projects

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: MGM 105

Students will be able to understand and apply the best practices of effective leadership. Students will consider their individual leadership style and its impact on effectiveness, and will practice leading virtual and face-to-face teams and supervising others.

MGM 230 Financial Literacy and Decision Making

1 Class Hour 4 Lab Hours 3 Quarter Credit Hours

Students will develop an understanding of financial literacy and planning, and learn software for making financial decisions. Students will complete an initial business plan for a sole proprietorship or business start-up.

MGM 231 Databases & Data Analysis

1 Class Hour 4 Lab Hours 3 Quarter Credit Hours

Students will learn to create Access database(s) for business data, and to create common business reports from existing Access databases. Assignments and exercises will focus on students practicing data analysis and decision making.

MGM 260 Foundations of Organizational Financial Analysis

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: MGM 230

Students will develop an understanding of the link of financial analysis to accounting and practice common financial analyses, such as ratios, budget versus actual, and cash flow. Students will learn the concept of the present value of money and related transactions, e.g., capital purchases. Students will complete business income and cash flow projections.

MGM 264 Sales and Service Management

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours

Students will study the sales process and practice selling presentations. Students will also be able to understand the concept of quality in manufacturing and service, and practice customer sales and service quality.

MGM 298 Management Practice Lab II

1 Class Hour 4 Lab Hours 3 Quarter Credit Hours
Prerequisite: MGM 198

This course will integrate and deepen students' learning through experiential exercises and or simulations that integrate the functional areas of business, management, and Microsoft Office Suite technology. Students will apply office productivity suite software to a variety of situations. Students will recognize how technology shapes the workplace and impacts productivity and effectiveness, and related technology use in business.

MGM 305 Managing Interpersonal & Team Effectiveness

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: MGM 105

In this course, students practice characteristics of high performance teams, both face-to-face and virtual teams and business projects, and recognize and practice the related effective interpersonal skills. Students also learn about effectiveness and optimal performance by individuals and teams, as well as how to manage effective relationships across the various areas of business operations (introduces/ reviews functional areas of business). Students learn and practice project management skills.

MGM 311 Data Analysis and Reporting

1 Class Hour 4 Lab Hours 3 Quarter Credit Hours
Prerequisite: MGM 131

In this course, students complete common business analyses using Excel, and create reports from analyzed data. They practice managerial analysis and decision making faced in common business transactions and scenarios.

MGM 314 Principles of Marketing

1 Class Hour 4 Lab Hours 3 Quarter Credit Hours

Students learn the marketing management cycle, product and service marketing, and customer relationship management. The course also provides an understanding of traditional/outbound and e-/internet/inbound marketing approaches and the seller/customer relationship. Students draft a marketing plan.

MGM 330 Managerial Accounting

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: MGM 130, MGM 170

In this course, students review financial accounting principles and statements and study the principles of management accounting, including the specific area of cost accounting using Microsoft Excel as an accounting tool. Students learn and apply cost classification, cost determination and behavior, and practice business decisions using cost behavior and relevant information and evaluating business performance.

MGM 335 Human Resource Management

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours

In this course, students learn the human resource management functions and how line managers and human resources work together in those functions. They also study the impact of social technology on human resource management and social networking on recruiting. Students practice the employee hiring process. Students gain an understanding of, and practice performance management. Students develop Access reporting skills using existing Access databases.

MGM 340 Engineering Finance

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: MA 125 or MA 210

In this course, students study the fundamentals of economic analysis with an emphasis on the topics that are relative to the work of an engineer. Topics will include basic economic concepts, financial decision making, financial statements, depreciation, financial ratios, time value of money, evaluating projects, breakeven analysis and continuous financial improvement.

MGM 355 21st Century Leadership

1 Class Hour 4 Lab Hours 3 Quarter Credit Hours

Students understand and develop their leadership style, strengths, and leadership effectiveness. They will develop an understanding of personal and professional ethics and how to have an influential voice on ethical/values dilemmas. The course also covers global leadership and leading across cultures and areas of technical expertise, and in face-to-face versus virtual settings. Students practice leading teams and team projects.

MGM 398 Integrative Lab 1 – Business Start-Up & Decision Making

1 Class Hour 4 Lab Hours 3 Quarter Credit Hours
This lab will focus on managerial decision making across business functional areas, principles of business start-up and plans, and will include development of an initial business plan. It will use cases, experiential exercises, and/or simulations.

MGM 411 Technology and Management Effectiveness

1 Class Hour 4 Lab Hours 3 Quarter Credit Hours
In this course, students explore the latest technology and technology trends and their impact on business management and operations. Students further develop their computational thinking skills and practice computational thinking and programming. Students study technology trends in their chosen area of work/career, and practice project management.

MGM 413 Business Presentations

1 Class Hour 4 Lab Hours 3 Quarter Credit Hours
Students practice developing clear, concise and logical flow of ideas for presentations, and develop and practice skills for informal and formal presentations. Students also practice current presentation technology, including teleconferencing. Students learn to make business video(s), such as a recruiting or business communication video.

MGM 415 Career Advancement and Success

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
In this course, students learn career management skills, including managing job/career changes and advancement; understanding current trends in working, career, and career management; current job outlook; and the impact of technology and social media on career management and recruiting. Students design and begin to develop a portfolio and a career plan that includes future advancement. Students understand and practice internal and external relationship management.

MGM 425 Productions and Service Operations Management

1 Class Hour 4 Lab Hours 3 Quarter Credit Hours
Prerequisite: MA 300
Students develop an understanding of the most important theories and tools used to manage world-class firms to achieve a competitive advantage; and learn and apply operations strategy, process design, quality, inventory theory, and project management. They practice common operations/management decisions, and understand the link between customer service and operations management.

MGM 430 Financial Management

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
In this course, students review financial accounting principles and statements; learn to analyze financial statements using profitability, liquidity, debt, asset activity, and market value ratios; and learn and apply the concepts of the time value of money. Students will be introduced to the basics of capital budgeting, and will understand and practice both short-term and long-term financial decision making.

MGM 445 Negotiation

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Students learn and practice negotiations through the principled negotiation method; understand the differences between principled negotiation and the more traditional method of positional bargaining; learn to identify interests, create options for mutual gain; and propose fair standards for deciding among possible options. Students practice negotiating in both individual and team scenarios. Students also examine customer/service relationship management and its link to negotiations.

MGM 460 Investments

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Students learn financial planning and investing and are exposed to various analytical tools helpful in making investment decisions. Students learn the process of planning, making a budget and learning the wise use of credit. Students also study the criteria for a balanced portfolio, risk and potential return, and learn about buying and selling stock using online trading and the Wall Street Journal.

MGM 485 Management of Change and Innovation

1 Class Hour 4 Lab Hours 3 Quarter Credit Hours
Students study the individual and organizational change process, and understand and apply effective change management. Students also explore creativity and innovation, and the diffusion of innovation. Students learn the various sources of change and their impact on operations and management.

MGM 495 Strategic Management and Decision Making

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Students examine the complexity of business management and the indiscriminate nature of business competition. Working in teams, students analyze the competitive environment and determine a strategy for their own enterprise, making decisions about marketing, research and development, production, quality, human resources, and many other aspects of their business. Students complete a business simulation.

MGM 496 Professional Portfolio

1 Class Hour 1 Quarter Credit Hour
Students develop a final portfolio including resume, sample projects and work, brief bio, and related recruiting materials using both print and e-approaches. Students also develop and practice portfolio presentation and interview skills.

MGM 498 Integrative Lab II – Project Management Effectiveness

1 Class Hour 4 Lab Hours 3 Quarter Credit Hours
This lab will focus on managing and optimizing individual and organizational effectiveness, and project management.

MEDICAL LABORATORY TECHNOLOGY

MLT 110 Introduction to Medical Laboratory Technology

2 Class Hours 2 Lab Hours 4 Quarter Credit Hours
An introduction to clinical laboratory practices and procedures normally performed in a clinical laboratory, including quality control, laboratory math, safety, laboratory equipment, phlebotomy, accreditation, certification, and professionalism.

MLT 120 Urinalysis and Body Fluids

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisite: MLT 110
Co-requisite: MLT 121
An introduction to urinalysis and body fluid analysis, including the anatomy and physiology of the kidney, and physical, chemical and microscopic examination of urine, cerebrospinal fluid, and other body fluids. Correlation to abnormal findings and disease states will be discussed. Utilizes a student laboratory for experiences in basic urinalysis and body fluids analysis.

MLT 121 Immunology

4 Class Hours 4 Quarter Credit Hours
Prerequisite: MLT 110
Co-requisite: MLT 120
An introduction to the theory and application of basic immunology, including the immune response, principles of antigen-antibody reactions, and the principles of serological procedures. Methods of testing for diagnosis of immune system disorders, viral and bacterial infections will be discussed.

MLT 130 Hematology I

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisites: MLT 120, MLT 121
Co-requisites: MLT 131, MLT 132
Introduction to the theory and practical application of routine and special hematology procedures including, maturation sequence of formed elements, normal and abnormal morphol-

ogy and associated diseases are discussed. Utilizes a student laboratory for experiences in basic hematology practices and procedures.

MLT 131 Medical Microbiology I

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisites: MLT 120, MLT 121
Co-requisites: MLT 130, MLT 132

Fundamentals of microbiology with emphasis on pathogenic bacteria and infectious disease, including collection, setup identification, susceptibility testing, and reporting procedures. Laboratory experience will include approaches in classification and identification of pathogenic organisms.

MLT 132 Clinical Chemistry I

3 Class Hours 2 Lab Hours 4 Quarter Credit Hour
Prerequisites: MLT 120, MLT 121
Co-requisites: MLT 130, MLT 131

An introduction to the principles and procedures of various tests performed in clinical chemistry. Presents the physiological basis for the test, the principle and procedures for the test, and the clinical significance of the test results, including quality control and normal values. Also includes basic chemical laboratory techniques, chemical laboratory safety, electrolytes and acid-base balance, mineral and bone metabolism, carbohydrates, renal function, hemoglobin production disorders. Students will be expected to correlate laboratory test results with normal physiology and biochemistry and with disease states. Utilizes a student laboratory for experiences in basic clinical chemistry procedures.

MLT 240 Hematology II

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisite: MLT 130
Co-requisites: MLT 241, MLT 242

A study of hemostasis and coagulation in normal and disease processes. A continuation of theory and principles of formed elements and their function in normal and pathologic processes. Also introduced are additional basic practices and procedures in the hematology laboratory.

MLT 241 Medical Microbiology II

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisite: MLT 131
Co-requisites: MLT 240, MLT 242

Fundamentals of microbiology with emphasis on parasitology, mycology, and virology. Proper recovery and handling of specimens, growth requirements, and identification of organisms will be covered. Laboratory experience will include approaches in classification and identification of pathogenic organisms utilizing morphologic, cultural, biochemical, enzymatic, serologic, and nucleic acid analysis. Mycology, parasitology, and virology will be introduced.

MLT 242 Clinical Chemistry II

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisite: MLT 132
Co-requisites: MLT 240, MLT 241

A continuation of the principles and procedures of various tests performed in Clinical Chemistry I. Presents the physiological basis for the test, the principle and procedures for the test, and the clinical significance of the test results, including quality control and normal values. Also includes proteins, liver function, lipids, enzymes, metabolites, endocrine function, tumor markers, cardiac markers, therapeutic drug monitoring and toxicology. Students will be expected to correlate laboratory test results with normal physiology and biochemistry and with disease states. Utilizes a student laboratory for experiences in basic clinical chemistry procedures.

MLT 250 Immunohematology

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisites: MLT 240, MLT 241, MLT 242

A study of blood antigens and antibodies. Performance of routine blood banking procedures, including blood group and Rh typing, antibody screens, antibody identification, compatibility testing, blood donations, and transfusion therapy. Record keeping and quality control techniques will also be discussed. Utilizes a student laboratory for experiences in basic immunohematology procedures.

MLT 251 Clinical Practicum I (5 weeks)

24 Lab Hours 6 Quarter Credits
Prerequisites: MLT 240, MLT 241, MLT 242

This course is designed to supplement and expand upon the foundational knowledge provided during the didactic portion of the MLT program. The practicum will be completed at a variety of affiliate laboratories (usually hospital-based) to provide the training required to apply knowledge gained during the program into practice. Students will be required to perform both routine and challenging laboratory tests. The collection, processing, and distribution of lab specimens according to standard procedures will be studied. Safety standards, legal and ethical behaviors, and quality control will be emphasized in a direct patient care setting. The course allows students to rotate through key areas of the clinical laboratory including, hematology, coagulation, urinalysis, and phlebotomy. Concepts, methods, and procedures discussed/studied in lecture and lab will be reinforced in the clinical practicum.

MLT 260 Medical Laboratory Technology Seminar

2 Class Hours 2 Quarter Credit Hours
Prerequisites: MLT 250, MLT 251

Professional topics in clinical laboratory science, including but not limited to, weekly discussion of materials covered during

clinical site visits. Professional certifications and organizations are also discussed. Topics in lab accreditation, inspection, resume writing, professionalism, and management are covered as well.

MLT 261 Clinical Practicum II (10 weeks)

24 Lab Hours 8 Quarter Credit Hours

This course is designed to supplement and expand upon the foundational knowledge provided during the didactic portion of the MLT program. The practicum will be completed at a variety of affiliate laboratories (usually hospital-based) to provide the training required to apply knowledge gained during the program into practice. Students will be required to perform both routine and challenging laboratory tests. The collection, processing, and distribution of lab specimens according to standard procedures will be studied. Safety standards, legal and ethical behaviors, and quality control will be emphasized in a direct patient care setting. The course allows students to rotate through key areas of the clinical laboratory including blood bank, chemistry, immunology, and microbiology. Concepts, methods, and procedures discussed/studied in lecture and lab will be reinforced in the clinical practicum.

CONSTRUCTION MANAGEMENT

MSCM 510 Fundamentals of Project Management

4 Class Hours 4 Quarter Credit Hours

Topics include project management life cycle and process; identifying and selecting projects; developing a project proposal; techniques for planning, scheduling, resource assignment, budgeting , and controlling project performance; project risks; project manager responsibilities and skills; project team development and effectiveness; project communication and documentation; and project management organizational structures. The concepts in the course support the project management knowledge areas of the Project Management Institute's A Guide to the Project Management Body of Knowledge (PMBOK R Guide).

MSCM 511 Construction Delivery Methods

4 Class Hours 4 Quarter Credit Hours

This course examines the multiple types of contract delivery methods used in the construction industry and the project administration and legal issues associated with each. Topics will include contract type, party responsibility, project documentation, relevant contract law, and dispute resolution.

MSCM 512 Construction and the Environment

4 Class Hours 4 Quarter Credit Hours

This course will focus on the environmental impact of con-

struction projects. The course will examine best practices to ensure sustainable design and construction of building facilities, site development and infrastructure work. Topics covered will include Environmental Impact Assessment (EIA), Low Impact Design (LID), LEED, and the Institute for Sustainable Infrastructure (ISI) guidelines among others. Characteristics of successful sustainable projects will be examined through case studies and engagement with industry professionals.

MSCM 513 Relationship & Dispute Management

4 Class Hours 4 Quarter Credit Hours

This course will focus on building and maintaining effective relationships across the various diverse stakeholders in the construction industry – such owners/executives, employees, general contractors, construction managers, specialty trades, suppliers, and customers. Students also learn conflict and effective conflict management, and the principled negotiation approach. Students will understand and practice dispute resolution and management. Students will focus on the impact of diversity on relationship and conflict management, negotiation, and dispute resolution.

MSCM 520 Effective Projects and Teams

4 Class Hours 4 Quarter Credit Hours

In this course, students will learn the unique aspects of teams in the construction industry, the characteristics of highly effective teams, and how to develop and manage such teams. Students will practice teamwork and leading teams. Students will also explore the impact of labor demographics, job/contract, and the construction industry culture and practices on effective teamwork and performance. Students will understand the connection between teams, project management, and effective performance.

MSCM 521 Risk Management

4 Class Hours 4 Quarter Credit Hours

This course studies the principle and techniques used in risk analysis and mitigation in the construction industry. Topics will include types and sources of risk, risk analysis tools, risk hierarchy, and strategies to minimize risk impact on a construction project. Through case studies, students will gain an appreciation of the relationship between risk and project success.

MSCM 531 Construction Health & Safety Policy

4 Class Hours 4 Quarter Credit Hours

This course will focus on OSHA regulations pertinent to construction field operations. Attention will be directed to the best practices, means, methods and processes to develop and implement safety planning policies and measurement of those policies. Emphasis will be placed on OSHA Standards for the construction industry with special attention to those

areas which are of greatest concern to OSHA in field operations, Personal Protection, Fall Protection, Struck by Objects, Electrocutions, Confined Space Entry, and Caught in Between.

MSCM 532 Construction Project Finance and Cost Accounting

4 Class Hours 4 Quarter Credit Hours

This course will focus on common financial reports used in the construction industry such as types of contracts and their accounting, job cost systems and related accounting, and work-in-progress reporting and analysis. Students will also learn budget versus actual and financial ratios calculations and analysis. Students will also understand required financial statements – balance sheet, income statement, and cash flow – and how to interpret and use such statements.

MSCM 540 Leadership in the 21st Century

4 Class Hours 4 Quarter Credit Hours
Prerequisites: MSCM 510, MSCM 513, MSCM 520, MSCM 532

This course focuses on leadership theory and application/best practices in the construction industry. Students will understand and develop their leadership style, and related strengths and challenges. Students will understand core values, common values and ethical dilemmas in the construction workplace, and how to effectively respond to such dilemmas. Cases and/or simulations will be used to explore the current challenges and opportunities in the construction industry, such as safety and quality, sustainability, cost management, and labor issues.

MSCM 541 Lean Construction Principles & Practices

4 Class Hours 4 Quarter Credit Hours

In this course, students will examine the principles and practices of the philosophy of lean manufacturing as applied to construction. Topics will include case studies, customer value definition, process analysis, waste reduction, value added activities, the use of "pull scheduling," and the need for continuous improvement.

MSCM 542 Building Information Modeling

4 Class Hours 4 Quarter Credit Hours

This course provides students with an industry view of the application of Building Information Technology (BIM) to a construction project. Students will study basic computerized modeling technology and its relationship to the development of building information modeling data.

MSCM 543 Infrastructure Planning & Development

4 Class Hours 4 Quarter Credit Hours

In this course, students will examine public sector infrastructure planning, design and implementation at the local, region-

al and state level; the policies, procedures and organizations behind the planning and development of infrastructure projects; the funding of public sector infrastructure projects; and the methods for the award of contracts that ultimately lead to active construction projects. Through selected examples, students will see the relationship between physical infrastructure systems including roads, public transportation, community facilities, public open space, surface drainage, and electric, gas, water, and waste disposal.

MARINE

MT 105 Introduction to Marine Technology

2 Class Hours 2 Quarter Credit Hours

Students will be introduced to the operation of the marine lab and program, potential job opportunities and the working environments of Marine Technology. Students will become familiar with the tools used in the repair of marine vessels and safety practices to be used. Students will also practice information retrieval as well as record-keeping. Topics covered are safety in the lab, measuring tools, service manuals, computerized information retrieval, tool identification and use, and fastener identification and uses. Students will also be asked to demonstrate proficiency using appropriate shop equipment.

MT 114 Marine Welding and Cutting

1 Class Hour 3 Lab Hours 2 Quarter Credit Hours

This course is intended to teach students the fundamentals of using both oxy/acetylene and electric welding equipment. Students will learn the three different classes of welding, safety precautions associated with each class and will practice basic welding, brazing, and cutting techniques. Course instruction will include both MIG and TIG welding techniques.

MT 116 Introduction to Engine Theory

3 Class Hours 3 Quarter Credit Hours

This course is the study of two- and four-cycle internal combustion engine operation and design. This course will cover inboard, outboard, and diesel engine design. Topics covered are: engine identification, internal components, cooling systems, lubrication systems, and preliminary diagnosis of internal noises, and excessive smoke. The course will also cover basic maintenance practices, as well as major and minor component replacement.

MT 117 Introduction to Engine Lab

4 Lab Hours 1 Quarter Credit Hour

Students will practice compression and vacuum testing, oil pressure, cooling system examination, and engine noise analysis. Students will learn to identify different engine configurations through the use of VIN or model numbers and will practice finding specifications in service manuals or by using

computerized information systems. Students will practice basic maintenance procedures as well as component replacement.

MT 118 Introduction to Electricity Fundamentals

3 Class Hours 3 Quarter Credit Hours

This course covers electrical fundamentals from "What is electricity?" to basic troubleshooting techniques. Topics covered will be: how electricity is produced, types of electricity, Ohm's Law, basic circuit construction, conductors, insulators, induction, electrical testing tools, and diagnosis of circuit problems.

MT 119 Introduction to Electricity Fundamentals Lab

4 Lab Hours 1 Quarter Credit Hour

In the lab, students will learn the use of multimeters and other test equipment to diagnose and repair electrical circuits and components including lights, gauges, solenoids, relays, voltage regulators, motors, and generators. Students will be instructed in the correct methods of constructing circuits for both the marine and recreational environment.

MT 120 Advanced Marine Electricity and Electronics Installation

4 Class Hours 6 Lab Hours 7 Quarter Credit Hours
Prerequisites: MT 118/119

This course prepares students to both install and troubleshoot marine-specific electrical systems. Topics studied and lab exercises include USCG and ABYC standards, wire designs, corrosion factors, AC/DC circuit panels, battery switches and isolators, inverters, RFI suppressors, multi-wire systems, lighting, electric pumps, amperage, and power requirements. Lab work will expose students to many forms of marine electronic equipment including: VHF radios, depth finders, GPS, and RADAR. Students will also learn how to interface and install today's marine navigation and communications equipment. Lab exercises will include wire and cable installations, antenna designs, RFI suppression, and the limitations of the NMEA 0183 standard.

MT 127 Marine Engine Applications

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: MT 116/117

Four-stroke gasoline engine designs, nomenclature, maintenance, and diagnostics will prepare students for future courses. Students will perform inspection and service procedures to ignition, fuel, cooling, exhaust, and internal engine systems specific to marine applications.

MT 138 Outboard Engine Overhaul and Systems Diagnosis

4 Class Hours 8 Lab Hours 8 Quarter Credit Hours
Prerequisites: MT 116/117, MT 118/119

Routine outboard maintenance and repair problems associated with one- and two-cylinder outboard engines will be the focus of this course. Lectures will cover two- and four-cycle theory, basic troubleshooting procedures, synchronization procedures, seasonal maintenance, and winterizing. Students will perform extensive diagnostic work on various engine systems, with emphasis on in-line and "V" configuration engines. Students will perform routine maintenance procedures and become proficient with the use of reconditioning procedures on internal engine components and return their engines to factory running specifications.

MT 215 Fuel Systems Theory and Introduction to EFI Applications

4 Class Hours 4 Lab Hours 5 Quarter Credit Hours
Prerequisites: MT 116/117, MT 118/119 and either
AUT 103/104 and AUT 105/106 or MT 120 and MT 127

Students are introduced to carburetor theory of operation, CFM requirements, mechanical fuel pumps, electric fuel pumps, fuel injection systems, and their related components. Topics covered will include throttle bodies, multi-port injection systems, direct fuel injection, pressure regulators, electronic sensors, and controls. Students will practice fuel tank removal and replacement of fuel pumps, fuel system troubleshooting, and injection cleaning. Students will remove, rebuild, reinstall, and adjust traditional carburetors as well as diagnose and repair TBI, MPFI, and DFI fuel injection systems. Lessons will also cover all USCG, ABYC regulations and standards for fuel tanks, lines, filters, pumps, and installations.

MT 216 Marine Drive Systems Theory and Service

4 Class Hours 4 Lab Hours 5 Quarter Credit Hours

Students will work with a variety of inboard engine reverse gear assemblies and drive systems. Students will gain experience with removal, testing, rebuilding, and diagnosis of sterndrive and inboard assemblies. Lessons and lab work include pressure and vacuum testing, disassembly procedures, internal component cleaning, inspection, and evaluation. Students will set gear height, lash, and bearing pre-load and rolling torque to factory specifications. Typical "two-shaft" and planetary gear assemblies will be disassembled, inspected, and reassembled to factory specifications. Both manual and hydraulic shift controls will be discussed and studied as part of the lab experience. Shafts, cutlass bearings, and shaft sealing methods and procedures will be covered at length, and students will practice routine service to these systems as part of the lab experience.

MT 217 Diesel Engine Service and Maintenance

2 Class Hours 6 Lab Hours 4 Quarter Credit Hours
Prerequisites: (MT 116/117, MT 118/119 and MT 120/127) or (AUT 103/104 and AUT 105/106)

This course introduces students to the operating principle of diesel engines. Course studies will include: two- and four-cycle engines, combustion chamber designs, low- and high-pressure fuel delivery systems, cold start aids, supercharging, intake/exhaust requirements, engine diagnostics, and re-powering considerations. Students will gain experience in lab by performing maintenance and engine performance troubleshooting on a variety of popular engine designs.

MT 218 Marine Systems

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours

Common systems of both marine and recreational vehicles will be designed and installed by students. System components include water and MSD tanks, manual and electric pumps, AC/DC lighting fixtures, electric, alcohol, LPG, and CNG appliances. Students will learn proper service and installation procedures with emphasis on all applicable industry safety codes and standards.

MT 254 Marina and Boatyard Management

3 Class Hours 3 Quarter Credit Hours

Students will learn the practices and procedures necessary to successfully operate a marine business. The course will cover the special circumstances specific to a marine business such as insurance considerations, environmental control, and storm preparation considerations. The course will follow the guidelines and recommendations found in the ABBRA (American Boatbuilders and Repairers Association) Boatyard & Marina Operator's Manual.

MT 255 Marine Industry Internship

20 Lab Hours 4 Quarter Credit Hours
Prerequisites: Completion of all Quarter I through Quarter V MT required technical courses

Students will work off-site at an approved marine related business. These businesses will be selected based upon their suitability to provide a valuable learning experience for students in a variety of related specialty areas within the industry. Student progress will be monitored weekly by the Marine Technology Department to ensure compliance with experiential learning criteria established by the department.

MT 258 Elements of Marine Surveying

1 Class Hours 3 Lab Hours 2 Quarter Credit Hours
Prerequisites: MT 120, MT 127, MT 138, MT 215, MT 216, MT 217, MT 218

This course covers the details of the marine survey for both sail and power small craft. Students will learn what to look for

in evaluating a boat for pre-purchase and valuation as required by financial institutions and insurance companies. Students will learn the procedures for both invasive and non-invasive methods of determining hull and deck integrity; electrical, mechanical, and systems integrity; and compliance with accepted standards and regulations. Design and completion of the survey form will be covered and practiced by students. Students will be introduced to the codes and standards of both SAMS (Society of Marine Surveyors) and NAMS (National Association of Marine Surveyors). USCG regulations will be covered at length.

MT 260 OSHA Maritime Industry Safety (Ship Yard)

3 Class Hours 3 Quarter Credit Hours

This course will provide entry-level marine technicians information about their rights and employer responsibilities. The content focuses on the type of work involved in marina operations. Topics covered will be hazard identification, avoidance, control, and prevention. Other topics included will be walking and working surfaces; personal protective equipment; fall protection/scaffolding; electrical, confined, and enclosed spaces; fire protection; material handling; blood borne pathogens; machine guarding; ergonomics; and proper lifting techniques.

MT 261 Fiberglass Fabrication and Repair

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours

This is an introductory course teaching the essentials for fabricating and repairing damaged composite laminates. Students will work with polyester, vinylester, and epoxy resins, and a variety of fiberglass cloth materials to learn proper mixing and lay-up procedures for making effective repairs and new parts. Curing considerations and special procedures required when working with cored laminates and resin infused/vacuum-bagged laminates will be discussed and practiced by students.

MT 262 Advanced Composites and Fabrication

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: MT 261

This advance course teaches the essentials of fabricating plugs (male molds), female molds, and repairing complex damaged composite laminates. Students will learn the complexity of building plugs and molds with wood, resins, and fiberglass fabric materials. Students will also study curing considerations and special procedures required when making molds. Vacuum-bagging and "Splash" laminates will be discussed.

NETWORK ENGINEERING

NE 115 Computer and Networking Fundamentals

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours

This course provides a technical overview of computers and computer networking used in business. Hands on exercises are provided to give students experience with basic computer and network activities. The content serves as a technical foundation for later courses in the Network Engineering and Software Engineering programs.

NE 121 Windows Networking Essentials

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: NE 115

Students are introduced to a desktop operating system. They perform the installation of the operating system as well as implementing and conducting the administration of resources, the implementation, management and troubleshooting of hardware devices and drivers, the monitoring and optimizing of system performance and reliability, and configuring and troubleshooting the desktop environment.

NE 131 Networking for Small Businesses

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: NE 121, MA 100/110 with a grade of C or better

This course introduces students to basic concepts of networking. Students will apply the knowledge they learned in NE 121 and apply it to peer-to-peer networking using switches and routers. They will be introduced to the OSI model and TCP/IP.

NE 244 Desktop OS Troubleshooting

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: NE 121

This course provides students with theoretical and hands-on experience with the maintenance, troubleshooting and preventative maintenance of a modern personal computer operating system.

NE 245 Introduction to Networks

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: NE 131

This course continues with more in-depth discussion and labs dealing with the architecture, structure, functions, components, and models of the Internet and computer networks. The basic and advanced principles of IP addressing and fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for the curriculum. By the end of the course, students will be able to build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes.

NE 247 Windows Server

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: NE 121

Students will learn to install, configure and operate a modern network server in both workgroup and domain configurations. They will learn to use the logical components of a domain to design simple forest structures. They will create appropriate user accounts and security groups to protect access to servers and to secure specific resources stored on servers. They will configure and troubleshoot critical infrastructure services as well as manage and configure storage use.

NE 255 Linux Fundamentals

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: NE 115

During this course, students will be introduced to the installation, configuration, and management of a Linux operating system. At the end of this course, students will be able to understand the basic functions of the Linux operating system including the role of the system administrator. The course will discuss such topics as running the Linux system, using the graphical user interface (GUI), the Linux command line system, the Linux shell and text files and basic administration tasks.

NE 257 Routing and Switching Essentials

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: NE 245

Describes the architecture, components, and operations of routers and switches in a small network. Students learn how to configure a router and a switch for basic functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with RIPv1, RIPv2, single-area and multi-area OSPF, virtual LANs, and inter-VLAN routing in both IPv4 and IPv6 networks.

NE 259 Windows Server Lab

2 Lab Hours 1 Quarter Credit Hour
Prerequisite: NE 247

This is a hands-on course that reviews, reinforces and builds upon the Server Administration course to solidify skills needed in future courses. Students will use virtualization technology to build a small network of virtual servers and workstation computers. They will install roles and features to create and support a simple Active Directory and to configure the network for securely sharing resources such as files and printers.

NE 265 AS Capstone Project

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisites: NE 257, NE 259

This course features integration of the topics covered in the IT Networking Associate Degree Program. The course emphasizes teamwork in the design, construction, configuration and

troubleshooting of a simple network infrastructure, to include network servers, workstations, routers and switches.

NE 267 Introduction to Information Security
2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: NE 121
This course provides a broad overview to the field of information security. The course covers history, terminology and strategies involved in securing information assets and serves as a foundation course for more advanced studies in information, network and computer security. General and specific threats to information assets and defensive strategies for protecting those assets are covered. The course employs an integrated system of skill-building lessons, hands-on exercises, and self-assessment tools.

NE 268 Wireless Networks
2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: NE 115
This course provides a hands-on guide to planning, designing, installing and configuring wireless LANs. There is in-depth coverage of IEEE 802.11b/a/g/n/ac implementation, design, security, and troubleshooting. Students learn the principles of digital modulation, RF transmission, and antennas. They will be exposed to the technologies taking place in the Physical and MAC Layers of the OSI model. They will learn how to conduct a wireless site survey. They will understand the security vulnerabilities of wireless networks and implement the encryption and authentication features to secure them. They will learn to maintain and troubleshoot a wireless network.

NE 371 Network Scripting
2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: NE 247
Through the use of practical exercises, students will learn how to configure, maintain and administer a Microsoft client/server network using a Windows PowerShell. Students will work with scripting using the command line and an integrated scripting environment.

NE 381 Design and Implementation of an Active Directory Network
2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: NE 247
Students will learn how to configure and manage a Microsoft Windows-based Active Directory network environment through an integrated system of skill-building lessons, hands-on exercises, and self-assessment tools.

NE 393 WAN Technologies
2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: NE 257
In this course, students will develop skills in the configuration of advanced IP addressing techniques, WAN technology evaluation, WAN design, WAN protocol configuration and troubleshooting, packet analysis, and network management.

NE 395 Internet Servers
3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisites: NE 255, NE 267
This course studies the administration of web servers and other Internet servers. Students will learn to install and maintain Internet servers on various platforms. Topics include the installation and configuration of popular web servers such as IIS and Apache as well as managing DNS, FTP and mail servers.

NE 402 Linux System Administration
4 Class Hours 4 Lab Hours 6 Quarter Credit Hours
Prerequisite: NE 255
Students will learn the basics of Linux technology and be exposed to the maintenance of a Linux server that other users rely on for e-mail, Web, database, networking, or other system services. In addition to the theoretical issues covered, students will gain much practical knowledge through the use of hands-on projects designed to reinforce those concepts.

NE 404 Heterogeneous Network Administration
2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: NE 381, NE 402
This course will cover advanced system administration topics in operating systems. Subjects include but are not limited to configuring, networking and troubleshooting the Mac OS, Linux and Microsoft operating systems in a heterogeneous (mixed) environment.

NE 405 Mail Servers
3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisite: NE 395
In this course, students will develop skills in implementing and supporting current Mail servers used in business. Students will explore techniques to fulfill the messaging and collaborative needs of a networked environment; working with the Windows, Linux OS to provide email services, instant messaging services, data conferencing services, and more. Students will also become familiar with most features of e-mail settings and protocols (SMTP, POP, IMAP).

NE 406 Router Security and Firewall Management
2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: NE 257
This course introduces students to firewall management and basic router security. Topics include password protection, securing VTY connections, logging, SSH, firewall management using the ASA 5510 Adaptive Security Appliance.

NE 407 Virtualization
2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: NE 247
This course explores the use of virtualization. Concentration is on the implementation and maintenance of virtual machine infrastructures with emphasis on server-class virtual images. The differing virtualization techniques, such as full, OS, and paravirtualization will be examined. In addition, vendor offerings and open source options will be compared. The techniques used to move physical machines to the virtual domain will be evaluated and applied, as well as system security, patch management, backups, disaster recovery, and system runtime and response.

NE 416 Introduction to Network Engineering Senior Project
3 Class Hours 3 Quarter Credit Hours
Prerequisites: IT 378, CYB 394 or NE 381, NE 395, NE 402, NE 405
Students will work within technology groups to create a proposal for the design of a functioning physical network infrastructure based upon a case scenario. The technology groups will use critical thinking skills to identify alternative solutions to these designs and select an appropriate plan. Each technology group will complete specific documentation reflecting their response to the course scenario. Students will be required to provide progress reports, final course documentations and presentations.

NE 425 Network Engineering Senior Project
6 Lab Hours 3 Quarter Credit Hours
Prerequisite: NE 416
Students will configure, analyze, test and troubleshoot a complex, real-world heterogeneous physical network topology based upon a course scenario within a group setting. The heterogeneous network infrastructure will include Cisco devices and server technology, to include: routers, switches, firewalls, Windows servers, mail servers, Linux servers, database servers and others. Students will be required to provide written progress reports, final course deliverables and presentations.

NURSING

NUR 110 Introduction to Nursing

3 Class Hours 3 Quarter Credit Hours

This foundational course introduces students to the nursing process as a framework for the practice of professional nursing. Students will be introduced to nursing philosophy and theory as they learn to provide for the basic needs of well adults and elderly individuals of diverse social and cultural backgrounds. Emphasis will be placed on developing an understanding of nursing's core professional values and attributes, including integrity, caring, accountability, and respect for human dignity.

NUR 123 Nursing Fundamentals I

3 Class Hours 6 Clinical Hours Off-Site 5 Quarter Credit Hours
Prerequisites: NUR 110, BIO 107 and MA 109 (or higher)

This course provides the foundation for nursing practice by introducing basic clinical skills in the context of patient-centered care, evidence-based practice, and communication. Essentials of health assessment are introduced and students gain the skills required for obtaining a comprehensive health history and physical assessment for adult and geriatric patients. At the conclusion of this course, students will demonstrate competent basic nursing care including vital signs, patient safety, asepsis, and activities of daily living.

NUR 132 Nursing Fundamentals II

4 Class Hours 6 Clinical Hours Off-Site 6 Quarter Credit Hours
Prerequisites: NUR 123, BIO 124/125
Co-requisites: BIO 133, BIO 231

This course is designed to build on previous knowledge learned and will provide opportunities to develop additional competencies necessary to meet the needs of adult and elderly patients. Students are introduced to the concepts and practices of caring for the young adult through the elderly population in the medical surgical environment. Students are introduced to the critical thinking process to promote health and recognize alterations in wellness. Students will utilize the nursing process to develop appropriate nursing diagnoses and interventions for medical surgical adult patients. Students will identify and begin to use the concepts of inter-professional collaboration to improve patient care outcomes. Students will be introduced to the concepts of pharmacology and medication administration in the medical surgical patient.

NUR 244 Medical Surgical Nursing & Assessment I

4 Class Hours 6 Clinical Hours Off-Site 6 Quarter Credit Hours
Prerequisites: NUR 132, BIO 133, BIO 231
Co-requisite: BIO 233

This course is part one of a two-part series focusing on nursing care of the adult patient with acute and non-acute health care issues, including special considerations that apply to the geriatric population. Students learn through didactics, simulations, and clinical experiences as they focus on health promotion, assessment, pharmacology, physiology, and alterations in the human system affected by disease. The course covers concepts associated with evidence-based nursing practice, clinical informatics, critical thinking, cultural competence, inter-professional collaboration, client teaching, and end of life care utilizing the nursing process.

NUR 256 Medical Surgical Nursing & Assessment II

4 Class Hours 6 Clinical Hours Off-Site 6 Quarter Credit Hours
Prerequisites: NUR 244, BIO 233
Co-requisite: NUR 257

This course is part two of a two-part series focusing on nursing care of the adult client with complex health care issues in the medical/surgical setting. This course provides an understanding of the nurse's role in health and illness within evolving practice environments and across the spectrum of health and illness. Students use the nursing process to provide nursing care that addresses patients' physiological, pathophysiological, and psychosocial needs. The course covers concepts of advanced medical-surgical nursing with management and planning of the nursing process and nursing diagnoses. Students explore decision-making, prioritizing care, and applying advanced patient-care skills and knowledge to provide comprehensive patient care. In the clinical practicum, the focus is on applying clinical practice strategies in the management of acute illness. Competencies include client care, treatment, pharmacology, and diet therapy of the client.

NUR 257 Mental Health Nursing

2 Class Hours 6 Clinical Hours Off-Site 4 Quarter Credit Hours
Prerequisites: NUR 244, BIO 233
Co-requisite: NUR 256

This course focuses on assessing, prioritizing, implementing, and evaluating psycho-therapeutic interventions for clients across the lifespan with mental health and psychiatric conditions. Positive psychology and holistic approaches are used to highlight the causes of mental health difficulties, the importance of stress management, wellness and preventative care. Priorities will focus on conducting thorough mental status exams, understanding major psychiatric disorders, care planning, patient safety, rights and responsibilities, continuity of care, resources and achieving optimal outcomes.

NUR 264 Maternal Child Health Nursing

2 Class Hours 6 Clinical Hours Off-Site 4 Quarter Credit Hours
Prerequisites: NUR 256, NUR 257
Co-requisite: NUR 265

Building upon previously-mastered knowledge and skills, this course prepares learners to provide basic family-centered nursing care to childbearing families during the prenatal, intrapartum, and postpartum periods. The role and scope of practice of the registered nurse regarding education and health promotion, risk assessment, and safe, evidence-based practice for culturally and socially diverse childbearing families is emphasized. Concepts of caring and quality improvement are integrated throughout the course. The clinical practicum focuses on the application of the nursing process in the care of individuals and families with childbearing and reproductive experiences.

NUR 265 Pediatric Nursing

2 Class Hours 6 Clinical Hours Off-Site 4 Quarter Credit Hours
Prerequisites: NUR 256, NUR 257
Co-requisite: NUR 264

This course builds on concepts of previous nursing courses with the emphasis on utilizing the nursing process in dealing with children and families. Students will explore child health promotion and nursing management of alterations in children's health. The practicum will focus on the impact of acute and chronic illness on children, adolescents and their families. Emphasis is on the developmental needs of children and adolescents. Students will develop pediatric clinical reasoning skills as they apply theory to practice in acute care, community and home settings, and during simulated clinical experiences.

NUR 274 Nursing Capstone Course

5 Class Hours 5 Quarter Credit Hours
Prerequisites: BIO 231, NUR 264, NUR 265
Co-requisite: NUR 275

This course provides students with an opportunity to prepare for the NCLEX-RN exam through standardized exams, individual remediation of knowledge gaps, and student-led nursing content review seminars. Students reflect on classroom and clinical learning experiences that shaped their professional development as a nurse. Students learn to write an effective resume and cover letter and prepare for job interviews, as they prepare for a career as a registered nurse.

NUR 275 Nursing Care of Complex Patients

5 Class Hours 6 Clinical Hours Off-Site 7 Quarter Credit Hours
Prerequisites: BIO 231, NUR 264, NUR 265
Co-requisite: NUR 274

This is the culminating clinical practice course, providing an opportunity for theoretical synthesis of prior work and educational experiences with present learning. Students will apply con-

cepts from The Institute of Medicine (IOM) and Nurse of the Future (NOF) competencies in application of the nursing process. Students will complete 60 clinical and lab hours with complex patients to demonstrate the nursing process, leadership, clinical judgment, best practices, ethical care and accountability.

NUR 370 Concepts of Professional Nursing

3 Class Hours 3 Quarter Credit Hours

This is the first course in the RN-BSN Program. This course was developed in collaboration with Rhode Island's diploma, associate and baccalaureate programs for the purpose of facilitating academic progression for nurses and introducing the baccalaureate nursing student to the issues and trends fundamental to nursing practice today which include social, political and economic influences. Students will examine and apply the interrelated concepts of the nursing meta-paradigm: person, environment, nurse, and health. Topics that will be introduced include nursing history, evidence-based practice, professional nursing roles, socialization into professional practice, theoretical frameworks, health policy, the teaching/learning process, informatics, communication, teaching at the aggregate level, and managing/providing quality care. This course also introduces learners to key concepts and strategies to be successful in the online learning community.

NUR 378 Health Assessment Across the Lifespan

4 Class Hours 4 Quarter Credit Hours
Prerequisites: NUR 370, NUR 386, BIO 374

This course presents the background and skills essential for the holistic model of health assessment principles and physical examination techniques related to the biological, psychological, social, and spiritual dimensions of health, including cultural and developmental determinants across the lifespan. The application of selected principles from the physical and social sciences are incorporated throughout the course. Emphasis is placed on assisting students to develop clinical reasoning skills that prepare them to provide nursing care safely and with a commitment to quality.

NUR 384 Health Policy, Finance, and Regulation

4 Class Hours 4 Quarter Credit Hours
Prerequisites: NUR 370, EN 331

The purpose of this course is to provide students with working knowledge of the healthcare system, both in the United States and globally. The focus will be healthcare organization, financing, policy, and regulation as well as service delivery from both the private and public perspectives. Critical thinking skills and strategies needed by professional nurses to participate in health care planning and health consumer advocacy for improved health outcomes is emphasized.

NUR 386 RN Licensure

0 Quarter Credit Hours

NUR 386 awards 0 credits for nurses who have successfully completed their licensure.

NUR 388 Informatics and Healthcare Technology

4 Class Hours 4 Quarter Credit Hours
Prerequisites: NUR 370, NUR 386, EN 331

This course examines the history of healthcare informatics, current issues, basic informatics concepts, and health information management systems. The use of technology to help make decisions and to improve the health status of the individual, family, and community will be emphasized. Students will apply informatics concepts to a current clinical practice setting and suggest methods to use technology to improve patient safety and work effectiveness. Students will also learn to identify, gather, process, and manage information/data. Students will use information and technology to communicate, manage knowledge, mitigate error, and support decision making as a nurse in healthcare today.

NUR 390 Ethical Issues in Nursing

3 Class Hours 3 Quarter Credit Hours
Prerequisites: NUR 370, NUR 386, EN 331

This course offers learners the opportunity to utilize knowledge from nursing theory, arts, sciences, and humanities to increase awareness of ethical and legal issues in practice, and to develop skill in the application of a decision-making process that embraces ethical and legal constructs essential to professional nursing practice and healthcare delivery systems. Emphasis is placed on the role of the Code of Ethics for Nurses and values clarification. Legal aspects of practice are explored. The advocacy role of the professional nurse is applied to improve patient safety and outcomes for diverse populations in a global society.

NUR 394 Quality and Safety

4 Class Hours 4 Quarter Credit Hours
Prerequisites: NUR 370, NUR 386, EN 331

This course focuses on the critical role of the nurse in providing leadership and accountability for patient safety across culturally and ethnically diverse healthcare settings. Students critically review current national guidelines and reports, reflect on their own experiences as recipients and providers of healthcare, and identify areas for improvement in system effectiveness. An examination of the patient's lived experience of loss due to system ineffectiveness provides a powerful context for students' further professional formation as patient advocates committed to coordinating and ensuring ethical, safe, patient-centered care across healthcare settings.

NUR 398 Nursing Research and Evidence-Based Practice

4 Class Hours 4 Quarter Credit Hours
Prerequisites: NUR 370, NUR 386, EN 331
Prerequisite or Co-requisite: PS 410

Standards of professional nursing practice, the ethics of care, and the moral responsibility to safeguard human subjects are emphasized as students engage in the research process and reflect on the role of research to knowledge development in the discipline. Current research evidence is examined as it informs professional nursing practice with culturally and ethnically diverse populations. Students learn to construct relevant research questions, critically appraise quantitative and qualitative research, and identify evidence to make clinical decisions and guide practice.

NUR 420 Principles of Prevention and Population Health

4 Class Hours 3 Lab Hours 5 Quarter Credit Hours
Prerequisites: All 300-level Nursing courses, EN 331

This course focuses on theories and concepts related to current trends in nursing leadership and management. Students will examine contemporary, professional, and social issues directly influencing nursing in a vulnerable health care system that is continually changing. The content in this course emphasizes investigation and analysis of diverse leadership styles, communication strategies, problem solving skills, dealing with conflict and conflict resolution methods, ethical decision-making in diverse multi-cultural healthcare settings, quality improvements, and the forces that drive change.

NUR 440 Leadership and Management

3 Class Hours 3 Lab Hours 4 Quarter Credit Hours
Prerequisites: All 300-level Nursing courses, EN 331

The focus of this course is on organizational and systems leadership and models, and quality improvement and safety principles essential to promote high quality patient care outcomes. The course focuses on key concepts for transformational nursing leadership in complex healthcare delivery settings including ethical and critical decision-making, initiating and maintaining effective working relationships, using mutually respectful communication and collaboration within intra- and inter-professional teams, coordination of care, delegation, accountability, and conflict resolution strategies.

NUR 490 Capstone Practicum

2 Class Hours 6 Lab Hours 4 Quarter Credit Hours
Prerequisites: All 300-level Nursing courses, NUR 420, NUR 440, EN 331, PS 410. Required Electives.

The capstone practicum provides RN students with the opportunity for informing and shaping current and future practice and leadership in professional nursing. The students' immer-

sion in this experiential practicum is guided by a nurse preceptor in a leadership position. Students collaborate with their preceptor to design a learning experience in a healthcare work environment or community setting that meets their professional interests and learning needs. Activities may focus on transitions and coordination of culturally sensitive care services; collaboration with members of professional healthcare teams; services in community care settings or professional organizations; policy and quality assurance participation; and/ or participation in research applications to practice. Within the virtual learning environment, seminar discussions with peers and faculty critically reflect on practicum experiences, integrate and apply previous learning to practicum experiences, and are applied to one's professional development. Transitioning to a professional nursing role is explored through examination of trends in practice; advocacy and health literacy; IOM Recommendations and Quality Safety in Nursing Education (QSEN); Standards of Care and Best Practice issues; and lifelong learning and ongoing socialization as a professional in nursing. Note: This course requires a 60-hour practicum experience. Students will keep a journal of their practicum experience and reflect on time spent observing and working with the nurse leader-preceptor, professional meetings attended, and project work in progress and completed.

OCCUPATIONAL THERAPY

OT 310 Service Delivery Models in Occupational Therapy

4 Class Hours 4 Quarter Credit Hours

This course provides students with an advanced understanding of concepts that underlie the provision of occupational therapy services. Analysis of the financial, legal, and regulatory contexts in which OT services are provided will serve as a basis for managing OT services including clinical and administrative decision-making.

OT 320 Theoretical and Clinical Reasoning in Occupational Therapy

4 Class Hours 4 Quarter Credit Hours
Prerequisites: OT 310, EN 331, BIO 440

This course provides students with an in-depth understanding of the influence of theory on occupational therapy practice. Various types of clinical reasoning will be analyzed and applied to students' practice experiences. Students will become familiar with the ways in which theory is developed and begin the process of using theoretical information to make clinical decisions. Use of the current Occupational Therapy Practice Framework will be included.

OT 325 Kinesiology

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours

This course will provide students with advanced knowledge of human movement including joint motions and muscle actions, biomechanics and movement analysis. Manual muscle testing, goniometry and other biomechanical assessment techniques will be taught. Emphasis will be on the analysis of normal movement, creating treatment plans to maintain and restore musculoskeletal functions, and the development of intervention planning for orthopedic conditions, including an introduction to modalities.

OT 410 Critical Analysis of Scientific Literature

4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 331, OT 310, OT 320

This course is the first in the sequence addressing research competency. The goal of this course is for students to learn how to locate and understand a research article. Topics include identifying and understanding the components of a research article, judging its relevance to practice situations, and understanding the components of evidence-based practice. Examples will utilize both qualitative and quantitative research methods. Students should be able to critique an article for possible inclusion in a literature review.

OT 530 Service Management in Mental Health

4 Class Hours 2 Lab Hours 5 Quarter Credit Hours
Prerequisites: OT 320, BIO 440, PS 410 or equivalent
Co-requisite: OT 410

This is the first course in the occupational therapy service management sequence. Emphasis is on evaluation and treatment planning for OT intervention with people who have disorders in the psychosocial realm. This course will serve as an introduction to the procedures, terminology, and statistics associated with the use of assessment tools. Students will select and apply appropriate frames of reference for use with case studies that are presented on paper or in interactive media. Students will practice leading the occupational therapy team in settings such as psychiatric hospitals, geropsychiatric units, adult day programs, and other community-based programs.

OT 536 Level I A Fieldwork

3 Class Hours 1 Quarter Credit Hour
Prerequisites: OT 320, PS 410
Co-requisite: OT 530

This is the first of three distinct, required Level I fieldwork experiences. Students will be placed in a setting in which they can focus on psychosocial issues with a variety of populations. This will allow engagement with the populations and concerns being addressed in the concurrent service management

course. Students will experience the role of the occupational therapist in healthcare and wellness, with an emphasis on evaluation, intervention and program planning, and development of advanced practical skills.

OT 540 Service Management in Pediatrics

4 Class Hours 2 Lab Hours 5 Quarter Credit Hours
Prerequisites: OT 410, OT 530, OT 536

This is the second course in the service management sequence. Emphasis is on evaluation and treatment planning for OT intervention with children and adolescents. Students will select and apply appropriate frames of reference for use with case studies that are presented on paper or in interactive media. Students will practice leading the occupational therapy team in settings such as schools, early intervention, and pediatric rehabilitation.

OT 546 Level I B Fieldwork

3 Class Hours 1 Quarter Credit Hour
Prerequisites: OT 410, OT 530, OT 536
Co-requisite: OT 540

This is the second of three distinct, required Level I fieldwork experiences. This fieldwork experience will allow student engagement with the pediatric population being addressed in the concurrent service management courses. Students will experience the role of the occupational therapist in healthcare and wellness, with an emphasis on evaluation, intervention and program planning, and development of advanced practical skills.

OT 548 Research Design

4 Class Hours 4 Quarter Credit Hours
Prerequisites: OT 410, EN 331, PS 410

This is the second course in the research sequence, in which students focus on designing a beginning level research project in an area of interest. Students will demonstrate an understanding of qualitative and quantitative research designs and methods used in healthcare, education, and community-based programs. They will identify the strengths and weaknesses in research designs for varied types of clinical questions.

OT 550 Service Management for Adult Rehabilitation

4 Class Hours 2 Lab Hours 5 Quarter Credit Hours
Prerequisites: OT 320, OT 325, OT 530, OT 540, BIO 440

This is the third course in the occupational therapy service management sequence. Emphasis is on evaluation and treatment planning for OT intervention with adults who have physical, cognitive, and perceptual disorders. Students will apply advanced knowledge in rehabilitation, including the use of physical agent modalities, ergonomics, post-surgical procedures, design and fabrication of orthotics, and assistive technology. Students will select and apply appropriate frames

of reference for use with case studies that are presented on paper or in interactive media. They will practice leading the occupational therapy team in settings such as acute-care hospitals, rehabilitation units, and outpatient settings.

OT 552 Leadership and Advocacy
3 Class Hours 3 Quarter Credit Hours
Prerequisites: OT 310, OT 320
This is a course designed to provide students with experience and knowledge in leading teams, programs, and forging new ideas in which occupational therapy practitioners may positively influence people's lives. Leadership requires student knowledge of management and administration. Advocacy requires student knowledge for fostering change and new initiatives within internal and external environments such as facility management, reimbursement, and legislative action.

OT 555 Wellness and Participation in Populations
3 Class Hours 3 Quarter Credit Hours
Prerequisites: OT 540, OT 546, OT 548
Co-requisite: OT 565
This is a course focused on student engagement in preventative care and exploring methods to engage populations, throughout the lifespan, in meaningful occupations of choice. This course is centered on the philosophy that active participation increases the likelihood of wellness and continued health while maximizing the overall well-being of the individual involved. This course does not deal with disabilities or limitations, but focuses instead on the abilities of individuals and groups to remain active participants in their roles and in society.

OT 556 Level I C Fieldwork
3 Class Hours 1 Quarter Credit Hour
Prerequisites: OT 540, OT 546
Co-requisites: OT 548, OT 550
This is the last of three distinct, required Level I fieldwork experiences. This fieldwork experience will allow student engagement with the adult rehabilitation or geriatric population being addressed in the concurrent service management courses. Students will experience the role of the occupational therapist in health care and wellness, with an emphasis on evaluation, intervention and program planning, and development of advanced practical skills.

OT 560 Service Management in Geriatrics
4 Class Hours 2 Lab Hours 5 Quarter Credit Hours
Prerequisites: OT 320, OT 530, OT 550, BIO 440
This is the last course in the occupational therapy service management sequence. Emphasis is on evaluation and treatment planning for OT intervention to enhance occupational participation for people aging with or without disabilities. Students will practice leading the occupational therapy team to meet the unique needs of this population in current practice in settings such as skilled nursing and assisted living facilities, adult day programs, and home care. Students will select and apply appropriate frames of reference for use with case studies that are presented on paper or in interactive media.

OT 565 Practicum in Population-Based OT Services
1 Class Hour 4 Lab Hours 3 Quarter Credit Hours
Prerequisites: OT 410, OT 540, OT 548, OT 550, BIO 440
Co-requisite: OT 555
This is a course dedicated to the development of leadership roles in an emerging, community-based program providing students the chance to actively promote wellness and participation across the lifespan. This course will allow students to select a population of interest, while employing strategies learned in previous courses to engage and encourage participation in meaningful activities, and facilitate the participants' engagement in occupations of choice. Program design for the selected population will be a focus of this course.

OT 670 Practice Issues for the Occupational Therapist Seminar
6 Class Hours 6 Quarter Credit Hours
Prerequisites: All Occupational Therapy program courses for Quarters I through VII
This is a course that integrates previously learned material into a culmination of problem-solving, case management, and advanced practice analysis related to the field of occupational therapy. Students will engage in higher level analysis and synthesis of issues pertaining to occupational therapy practice and development. Case-based and problem-based learning will be the foci of this seminar with instructor facilitation supporting student leadership and team building.

OT 673 Capstone Project
2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisites: All Occupational Therapy program courses for Quarters I through VII
This is the third course in the research sequence, focusing on participation in beginning level research. Research projects will be faculty facilitated and may be completed individually or in small groups. This is the final project of the program and may include the research and development of a new program or social initiative emphasizing occupational therapy leadership and emerging practice.

OT 688 and OT 698 Level II Fieldwork
35-40 Hours per Week for 12 Weeks 2 Placements
Prerequisites: All Occupational Therapy program courses for Quarters I through VII
Level II Fieldwork will be provided in two distinct settings in the community to allow students the opportunity to experience the role of the occupational therapist while focusing on assessment and evaluation of clients and client populations, development of programs and leadership roles in the health care community. Level II Fieldwork is offered after the completion of all MSOT coursework outlined in the curriculum. Each course will run for 12 consecutive weeks, full time. Part-time fieldwork (at least 50% of full-time equivalent) opportunities may be available in some cases. Two distinct (2) Level II fieldwork experiences are required.

OCCUPATIONAL THERAPY ASSISTANT

OTA 110 Foundations of Occupational Therapy Assistant Practice
4 Class Hours 4 Quarter Credit Hours
Co-requisite: OTA 111
This course introduces students to occupational therapy practice and the role of the occupational therapy assistant. Topics include history, principles, philosophy, and foundations that guide the profession of occupational therapy. An understanding of occupations as core to occupational therapy intervention and practice will be explored along with occupations-based models.

OTA 111 Foundations of Occupational Therapy Assistant Practice Lab
4 Lab Hours 2 Quarter Credit Hours
Co-requisite: OTA 110
This is the concurrent practical applications course to OTA 110. The focus is on using hands-on experiences to understand human occupation and the language and concepts of the profession.

OTA 122 Development of Human Occupation Across the Lifespan
4 Class Hours 4 Quarter Credit Hours
Prerequisites: BIO 100/101, OTA 110/111, EN 110
Students will explore normal human physical, social, behavioral and cognitive development, and performance throughout the lifespan. Typical changes in normative life tasks and occupational roles in relationship to environment and culture will be discussed. Theories including those of Maslow, Erikson and Piaget will be compared as they relate to normal development.

OTA 123 Functional Kinesiology
2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisites: BIO 100/101, BIO 120/121, OTA 110/111
The focus of this course is to lay the foundation for movement analysis. Students will learn biomechanics, physical task skill analysis and kinesiology, the study of human movement. Joint

motion and muscle action will be explored describing prime movers of the human body. The lab is a practical applications course for the understanding of normal movement, kinesiology, and body mechanics. Students will learn to assess strength and range of motion as well as to analyze movement during activities.

OTA 132 Pediatric Populations

4 Class Hours 4 Quarter Credit Hours
Prerequisites: BIO 100/101, BIO 120/121, OTA 122, OTA 136/137
Co-requisite: OTA 133

This course focuses on the study of pediatrics and the common disabilities treated in occupational therapy. The various environments in which occupational therapists practice with children will be explored. Students will gain an understanding of the pathology and dysfunction commonly treated in this population and will look at the occupational roles of normal as well as developmentally disabled individuals from infancy to adolescence. Human occupation and the occupational role of the child and adolescent will be reviewed in the context of living with disabling conditions. Legal and ethical considerations in pediatric practice will be discussed.

OTA 133 Pediatric Practice for Occupational Therapy

3 Class Hours 4 Lab Hours 5 Quarter Credit Hours
Prerequisites: BIO 100/101, BIO 120/121, OTA 122, OTA 136/137
Co-requisite: OTA 132

This course introduces students to occupational therapy process, evaluation, and treatment intervention in the area of pediatrics. Students will explore various assessments and treatment interventions used by the occupational therapy assistant in the pediatric practice area. Content will include postural control, feeding, positioning, and handling techniques, sensory integrative techniques, caregiver training, age-appropriate activities of daily living, education, play and leisure, and the student role. Instruction in performance areas for occupational therapy intervention for the pediatric population is provided. Practical applications, including treatment planning, treatment interventions, and the use of assistive technologies for the pediatric population will be explored.

OTA 136 Level I Fieldwork – Mental Health

1 Class Hour 3 Field Hours 2 Quarter Credit Hours
Prerequisites: HS 120, BIO 100/101, OTA 110/111, EN 110
Co-requisite: OTA 137

The first of two Level I fieldwork opportunities, this course offers students 30 hours of direct experience within the community in a clinical practice setting that focuses on the psychological and social factors that may limit engagement in occupation. Through interaction and selected participation, students will begin to integrate academic coursework with direct client interaction. Students also share and process their experiences in a one-hour weekly seminar and in corresponding classes. The seminar will be utilized to provide insight into the needs of the client population and to develop methods of applying knowledge to practice.

OTA 137 Mental Health Populations and Practice for Occupational Therapy

3 Class Hours 4 Lab Hours 5 Quarter Credit Hours
Prerequisites: BIO 100/101, OTA 110/111, EN 110
Co-requisite: OTA 136

This course is the first in the sequence of OTA courses related to a segment of occupational therapy practice. The lecture and lab content emphasizes the knowledge that students need for successful work with people at various points on the mental health/illness spectrum. Information includes features of specific diagnoses and practice settings, frames of reference and safety issues. Students will be introduced to the tools commonly used to assess relevant client factors and occupational performance. Students will plan and practice individual and group intervention techniques, including the use of group dynamics. Emphasis is placed on understanding the importance of psychosocial issues and therapeutic use of self as components of the holistic approach of occupational therapy in helping people of all ages assume and resume desired occupations in various life contexts.

OTA 236 Level I Fieldwork – Adult Rehab

1 Class Hour 3 Field Hours 2 Quarter Credit Hours
Prerequisites: OTA 123, OTA 132/133, EN 102
Co-requisites: OTA 242, OTA 243

Level IB Fieldwork is the second of two 30-hour, on-site experiences which offer students direct interaction with the adult/geriatric population. Through observation and participation in practice settings, students will begin to integrate what they see in the community with their academic coursework, creating an opportunity for professional growth and development. The primary focus of this fieldwork experience will be to observe adults within a variety of service settings. Students also share and process their experiences in corresponding classes. A weekly one-hour seminar will integrate learning from level IA and B experiences and prepare students for level IIA and B (full-time fieldwork) in Quarters V and VI.

OTA 242 Adult Populations

4 Class Hours 4 Quarter Credit Hours
Prerequisites: OTA 123, OTA 132/133, EN 102
Co-requisites: OTA 236, OTA 243

This course focuses on the pathology and dysfunction of the adult population treated by occupational therapy practitioners. It includes common conditions seen in occupational therapy. Students will explore the various occupations and occupational roles of adulthood and the effects of dysfunction on the adult. The study of environment and adaptations will be explored. Work, activities of daily living, and leisure will be addressed.

OTA 243 Adult Practice for Occupational Therapy

3 Class Hour 6 Field Hours 6 Quarter Credit Hours
Prerequisites: OTA 123, OTA 132/133, EN 102
Co-requisites: OTA 236, OTA 242

This course focuses on evaluation and treatment interventions used by the occupational therapy assistant working with adults with physical and cognitive/perceptual disabilities. Combining lecture and laboratory work, students will consider various practice models to plan, grade, and perform treatment interventions with an emphasis on purposeful activities and occupations to enhance role function. Use of adaptive equipment, splinting, and modalities will be explored.

OTA 250 Gerontology Practice for Occupational Therapy

3 Class Hours 3 Quarter Credit Hours
Prerequisites: OTA 123, OTA 132/133, EN 102

This course is designed to provide students with an understanding of the unique needs of the older adult. Students will apply principles of physical rehabilitation and psychosocial practice in an effort to gain an understanding of geriatric occupational therapy. Students will learn therapeutic interventions aimed at both prevention of dysfunction and restoration of health in older adults. They will demonstrate an understanding of occupational roles in later life. Students will study treatment interventions, adaptive techniques, and environmental technology utilized to remediate dysfunction and maximize independence in elders. Students will discuss cultural issues and professional ethics as they relate to this population.

OTA 255 Practice Issues for the Occupational Therapy Assistant

4 Lab Hours 2 Quarter Credit Hours (Meets in the first two weeks of Quarter V)
Prerequisites: OTA 236, OTA 242/243, OTA 250, MA 109, SS/ Humanities Electives
Co-requisite: OTA 258

The foundation of occupational therapy practice lies in the ability to problem solve for a variety of conditions or situations to restore, remediate, or maintain function. Students will gain the additional knowledge needed to understand and apply clinical reasoning in the field of occupational therapy. Students will demonstrate their clinical reasoning with case-based projects. Students will be introduced to administrative

duties typically required of an occupational therapy assistant in the practice areas they will enter for Level II fieldwork. Laws and ethical standards governing the practice of occupational therapy will also be discussed during this hands-on application course.

OTA 258 Level II Fieldwork I

35-40 hours per week for 8 weeks, 10 Quarter Credit Hours
Prerequisites: OTA 236, OTA 242/243, OTA 250, MA 109, SS/
Humanities Electives
Co-requisite: OTA 255

The Level II Fieldwork is the final phase of the OTA program. Working with occupational therapy recipients, students will participate in the evaluation process, planning and implementing treatment programs, communicating effectively, and developing professional relationships. Students will work under the supervision of a COTA or OTR who meets criteria as a clinical educator. The student and academic fieldwork coordinator will collaboratively select the practice environment. All practice environments must have a signed contract with the college. This is a full-time placement in a facility for 8 weeks. Actual contact time is 35-40 hours per week.

OTA 263 Senior Capstone and Practice Development Seminar

4 Class Hours 4 Quarter Credit Hours
Prerequisite: OTA 255
Co-requisite: OTA 268

This course provides students the opportunity to complete a capstone project in an area of interest. Through a combined partnership with faculty, students will select a project of their choice and complete the project with faculty as advisers. Students will be given the opportunity to present the final projects in a senior colloquium. This final course of the OTA curriculum will allow students to expand their knowledge of legal, ethical and professional considerations in occupational therapy with application to the fieldwork they have just completed. Professional licensure requirements, resume writing and job searching, and preparation for the national certification exam will be emphasized.

OTA 268 Level II Fieldwork II

35-40 Hours per week for 8 weeks 10 Quarter Credit Hours
Prerequisite: OTA 258
Co-requisite: OTA 263

This second Level II Fieldwork experience will offer students further exposure to occupational therapy practice. The second practice environment will provide a different experience for the student to continue to develop skills as an occupational therapy assistant. Opportunities to engage in an emerging practice environment may be offered for either of the Level II Fieldwork courses. Supervision in these environments will

be shared with occupational therapy practitioners and other health care providers. All practice environments must have a signed contract with the college. This is a full-time placement in a facility for 8 weeks. Actual contact time will be 35-40 hours per week.

PHYSICS (MATH/SCIENCE CORE)

PHY 126 Applied Physics & Lab

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisites: MA 100/110 or MA 109

This course studies the applications of fundamental concepts of physics. The topics covered include: the motion of objects, the forces that cause motion, velocity, acceleration, Newton's Laws, torques, work, power, and energy. The laboratory component is designed to give students the opportunity to have hands-on experience with the fundamental concepts of physics studied in the theory portion of the course.

PHY 200 Physics I & Lab

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisite: MA 125

This course is a non-calculus approach to the study of fundamental physics and includes kinematics and dynamics of bodies, velocity, acceleration, and Newton's laws of motion, forces in equilibrium, concurrent and non-concurrent forces, work, power, energy, and torque. Labs are performed within the course to reinforce concepts.

PHY 300 Physics II & Lab

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisites: MA 210, PHY 200

This is an algebraic approach to a second course in physics. The topics include: centripetal force, temperature, heat energy, mechanical waves, sound, electrostatics, and basic circuit elements. The laboratory component is designed to give students the opportunity to have hands-on experience with the fundamental concepts of physics studied in the theory portion of the course. Laboratory experiments will be performed to reinforce these concepts.

PLUMBING

PL 114 Pipe Fitting Basics

4 Class Hours 4 Quarter Credit Hours
Co-requisites: PL 117, MA 100/110

Students are introduced to a variety of piping material, fabrication techniques, tools of the trade, safety, and mathematical approaches.

PL 117 Pipe Fitting Basics Lab

2 Class Hours 4 Lab Hours 3 Quarter Credit Hours
Co-requisite: PL 114

Students produce piping projects utilizing tools, piping materials and the applied mathematical procedures put forth in PL 114.

PL 118 Blueprint Reading and Drafting

3 Class Hours 3 Quarter Credit Hours

This course covers basic drawing techniques and proper use of drafting equipment. Students will be introduced to different types of drawings, associated symbols, and terminology.

PL 123 Drainage, Waste and Vent, and Potable Water System Lab

2 Class Hours 4 Lab Hours 3 Quarter Credit Hours
Prerequisites: PL 114/117, PL 118
Co-requisites: PL 124, PL 126

Students are required to install their drainage, waste and vent, and potable water plumbing designs in a laboratory setting. The designs must be fully operational and conform to code.

PL 124 Drainage, Waste and Vent Design

4 Class Hours 4 Quarter Credit Hours
Prerequisites: PL 114/117, PL 118

Students are introduced to the different elements of plumbing design. Various codes and their requirements are covered. Students' designs are presented in a formal drawing.

PL 126 Potable Water Piping Design

3 Class Hours 3 Quarter Credit Hours
Prerequisites: PL 114/117, PL 118

Students study load calculations and appropriate sizing of domestic water systems. Various codes and methods are covered. Formal drawing presentation is a required portion of the course.

PL 230 Plumbing Fixture, Appliance and Appurtenance

4 Class Hours 4 Quarter Credit Hours
Prerequisites: PL 123, PL 126

This course introduces students to fixtures, appliances and other related devices that are found in residential and commercial buildings. Code requirements and applications are also studied in order to balance fixture utility, rough-in needs and building design.

PL 232 Troubleshooting and Repair

1 Class Hour 2 Lab Hours 2 Quarter Credit Hours
Prerequisites: PL 124/123, PL 126
Co-requisites: PL 230, PL 233

This course explores the repair, service, and retrofit aspects of the plumbing business. Attention is given to structural con-

cerns, repair approaches, product selection, and customer and trade relationships.

PL 233 Plumbing System Design and Fixture Installation Lab
2 Class Hours 4 Lab Hours 3 Quarter Credit Hours
Prerequisites: PL 124/123, PL 126
Co-requisite: PL 230
In this lab, students are required to design and install various plumbing systems from rough-in to finished fixtures. These will be actual working systems and meet all code requirements as well as trade practices.

PL 240 Pump System Design
4 Class Hours 4 Quarter Credit Hours
Prerequisites: AH 123, PL 114/117, PL 118
Co-requisite: PL 243
Students are introduced to residential and light commercial pumps and pumping systems. Students are required to design and size systems based on pump types and general requirements.

PL 242 Final Project
2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: PL 230/233, PL 232
The final project is the summation of all the previous quarters presented in a plumbing design which incorporates estimating and pricing. Students are required to design and draw a complete building project based on supplied specifications.

PL 243 Pump System Design Lab
2 Class Hours 4 Lab Hours 3 Quarter Credit Hours
Co-requisite: PL 240
Students are required to install basic water pumping systems from water source to pressurized storage tank. Various designs are used to reinforce application, component requirements and troubleshooting.

PSYCHOLOGY (SOCIAL SCIENCES CORE)

PS 140 Life-Span Development
4 Class Hours 4 Credit Hours
The purpose of Life-Span Development is to introduce students to the broad concepts of human growth and development from conception to death. Students will be introduced to human development from the prenatal stage to death with particular emphasis placed on early childhood, adolescence and old age. The course is especially designed for students entering the healthcare professions as the slant is toward practical application of all stages. Upon completion of the course, students should be able to demonstrate a basic knowledge of the developmental stages of life.

PS 201 Introduction to Psychology
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 102
This introductory course in psychology is a survey of the multiple aspects of human behavior. It includes, but is not limited to, such topics as the history of psychology, the biological foundations of behavior, memory, learning, personality, psychological disorders and treatment and social behavior. Importantly, this course will be geared to stress those areas of more practical significance for those in medical service fields.

PS 202 Psychology of Healthcare
4 Class Hours 4 Credit Hours
Prerequisite: EN 101 or EN 110
This course addresses the human element of clinical competence in providing health care. Students will explore the psychodynamics of interactions between health care workers and patients, the psychological influences of illness and pain, the psychosocial factors that impact one's effectiveness as a health care team member, the impact of families on a patient's treatment plan, the role of body image in patient responsiveness to treatment, and a variety of other psychosocial factors that influence health care delivery.

PS 203 Psychology of Happiness
4 Class Hours 4 Credit Hours
This course will explore the psychological principles associated with the experience, feelings and thoughts of happiness. Students will be exposed to a variety of research investigations that have studied different variables that impact happiness. Some of the subtopics discussed in this course include ways to define and measure happiness, differences and similarities in happiness across cultures, happiness and money, and ways to increase happiness.

PS 210 Human Relations in the Workplace
4 Class Hours 4 Quarter Credit Hours
Major skill areas covered in the course include making a good impression with your employer, managing conflict with difficult coworkers, working on a team with diverse groups of people, providing exceptional customer service, and managing on-the-job stressors. This course provides a set of practical human relations techniques that will help students increase the likelihood of job security and career advancement in any current or future job.

PS 330 Marriage and the Family
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 102 or its equivalent
This course is a review of psychological concepts relevant to understanding marital and family functioning. Topics will include mate selection, marital communication, intimacy, conflict resolution, transitioning to parenthood, managing crises, family violence, divorce, and balancing work, leisure and family.

PS 350 Forensic Psychology
4 Class Hours 4 Quarter Credit Hours
Prerequisite: ENG 331
This course addresses the psychological issues of human behavior that surround law enforcement and the legal system. It supplements information provided by physical evidence forensics courses and offers hands-on practice by utilizing psychological techniques implemented in the field. It familiarizes students with new technologies and available databases used in investigations. The course goes beyond criminal profiling popular in today's media and explores the findings of psychological research behind such issues as eyewitness identification (memory retrieval) and interviewing (conformity and obedience). Forensic Psychology also covers newer areas of concern such as psychological assistance in all career aspects of policing from personnel selection to dealing with the demands of the job.

PS 410 Applied Research Statistics
4 Class Hours 4 Quarter Credit Hours
PS 410 is an intermediate-level course designed to develop in students an expertise in identifying statistical approaches to research problems. Students will examine statistics and the rationale behind them. The will comprehend and interpret statistical results as they apply to their program. Students will master the APA style of writing by dissecting the results and discussion sections of journal articles in their program and by writing those sections using statistics learned in the course.

PHYSICAL THERAPIST ASSISTANT

PTA 102 Introduction to Kinesiology
2 Lab Hours 1 Quarter Credit Hour
Students will learn musculoskeletal anatomy and developmental milestones and reflexes and a basic understanding of normal movement and kinesiology.

PTA 111 Foundations of Physical Therapy
4 Class Hours 4 Quarter Credit Hours
This course focuses on the principles and philosophies that guide the profession of physical therapy. Disablement Models and the Guide to Physical Therapist Practice will be studied as the paradigms for physical therapy. This course establishes the foundation of knowledge for the physical therapist assistant.

PTA 112 Foundations of Physical Therapy Lab

4 Lab Hours 2 Quarter Credit Hours

The focus of this course is on using hands-on experiences to understand human movement and the language and concepts of the profession. Physical therapy skills covered include body mechanics, bed mobility and positioning, transfer training, basic gait training, range of motion exercises, physical therapy documentation, and communication with patients.

PTA 123 Data Collection Skills

1 Class Hour 4 Lab Hours 3 Quarter Credit Hours
Prerequisites: HS 110, PTA 102, PTA 111/112, MA 109, BIO 100/101

Content includes current tests and measures from the Guide to Physical Therapist Practice. Emphasis is placed on a lifespan approach. Students will learn to interview patients/clients and caregivers, use the International Classification of Functioning, Disability and Health (ICF), and complete documentation of their findings that follows contemporary standards.

PTA 124 Clinical Kinesiology

2 Class Hours 2 Quarter Credit Hours
Prerequisites: HS 110, PTA 102, PTA 111/112, BIO 100/101

This course is designed to explore the concepts of clinical kinesiology in relation to normal and abnormal movement patterns. Through the use of various teaching methods, students will also learn functional anatomy, clinical application of kinesiology concepts as well as motion analysis of the human body.

PTA 125 Clinical Kinesiology Lab

4 Lab Hours 2 Quarter Credit Hours
Prerequisites: HS 110, PTA 102, PTA 111/112, BIO 100/101

This lab is offered concurrently with PTA 124 as the practical applications course for the exploration of normal and abnormal movement patterns, palpation of anatomical structures, and analysis of functional movement.

PTA 136 Level I Clinical Education A

1 Class Hour 3 Clinical Lab Hours 2 Quarter Credit Hours
Prerequisites: HS 110, PTA 102, PHY 126, PTA 123, PTA 124/125, BIO 120/121 and CPR Certification for Health Care Providers and completed medical requirements.

Level I Clinical Education offers students direct experience in a clinical practice setting. Through observation and selected participation, students will begin to integrate academic coursework, creating an opportunity for professional growth and development. This course allows students to observe clients in actual treatment environments, interact with individuals involved in various programs, and experience direct contact with individuals involved in various service delivery systems. The primary focus of this clinical education experience will be musculoskeletal system interventions. Students also share and process their experiences in a seminar.

PTA 138 Physical Agents & Lab

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisites: PHY 126, PTA 123, PTA 124/125, BIO 120/121

Content focuses on the treatment plan and treatment interventions for modalities and soft tissue mobilization. Students develop knowledge of the physiological effects, indications, contraindications, and precautions of physical therapy interventions such as deep heat, cold, ultrasound, electrotherapeutic modalities, and whirlpool. Lab content focuses on modalities and soft tissue mobilization. Students develop the skills necessary to safely apply the physical therapy interventions such as deep heat, cold, ultrasound, electrotherapeutic modalities, and whirlpool.

PTA 139 Advanced Data Collection Skills

4 Lab Hours 2 Quarter Credit Hours
Prerequisites: PHY 126, PTA 123, PTA 124/125, BIO 120/121

Students will engage in physical therapy documentation and procedures including goniometry and manual muscle testing. Statistics and journal article critique will be covered.

PTA 142 Principles of Musculoskeletal Physical Therapy Intervention and Lab

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisites: PHY 126, PTA 123, PTA 124/125, BIO 120/121

This course will explore musculoskeletal physical therapy procedures across the lifespan. The symptoms and characteristics of common musculoskeletal conditions from infancy to adolescence to later adulthood will be presented. Physical therapy practice models and interventions for the musculoskeletal practice area will be described and applied through case studies. The importance of addressing patient cultural issues as a component of the holistic approach of physical therapy will be reinforced. Gait, locomotion, and balance impairments associated with amputation will be covered. The primary focus of the lab experience will be musculoskeletal physical therapy interventions including orthotic and prosthetic intervention. Students will also have the opportunity to integrate concepts learned in Data Collection Skills with selected interventions common to musculoskeletal practice.

PTA 143 Pathophysiology for the PTA

1 Class Hour 2 Lab Hours 2 Quarter Credit Hours
Prerequisites: BIO 120/121

This course will cover the process of disease and its effects on the body and the responses of cells, tissues, and organ systems to these disorders. General phenomena such as inflammation, immune response, and carcinogenesis will be considered as well as a survey of disorders common to the clinical setting characteristic of the various organ systems using a system-by-system approach.

PTA 237 Level I Clinical Education B

6 Clinical Lab Hours 2 Quarter Credit Hours
Prerequisites: PTA 136, PTA 138, PTA 139, PTA 142, PTA 143, EN 110

Course content and structure are similar to PTA 136, with an emphasis on more active participation whenever possible. An alternate practice environment will be provided to allow students direct experience in a cardiopulmonary system or neuromuscular system treatment setting.

PTA 240 Principles of Neuromuscular Physical Therapy Intervention and Lab

4 Class Hours 4 Lab Hours 6 Quarter Credit Hours
Prerequisites: PTA 136, PTA 138, PTA 139, PTA 142, PTA 143, EN 110

This course introduces students to physical therapy treatment intervention in the area of neuromuscular disorders including central nervous system disorders and peripheral nerve injury. Students will explore various tests, measures, and interventions used by the physical therapist assistant in neuromuscular practice; normal human development in relationship to environment and culture; and, intervention for the pediatric and geriatric population. The importance of addressing patient cultural issues will be reinforced in coursework and in the concurrent lab. The various environments in which neuromuscular physical therapists practice with children, adults, and older adults will be explored. Students will look at the physical roles of normal as well as developmentally-disabled persons from infancy to adolescence to later adulthood including the use of adaptive equipment and splinting.

PTA 242 Principles of Cardiopulmonary Physical Therapy Intervention and Lab

4 Class Hours 4 Lab Hours 6 Quarter Credit Hours
Prerequisites: PTA 136, PTA 138, PTA 139, PTA 142, PTA 143, EN 110

Students will learn therapeutic interventions aimed at both prevention of dysfunction and restoration of patients with cardiopulmonary disorders. Students will study treatment interventions, adaptive techniques, and environmental technology utilized to remediate dysfunction and maximize independence. Bariatrics and lymphatic system disorders are included. Students will discuss cultural issues and professional ethics as they relate to this patient population. In the lab portion of the course, students will participate in data collection, treatment planning, and implementation of physical therapy interventions related to the cardiopulmonary system. Integumentary system disorders and treatment interventions will be covered.

PTA 253 Practice Issues for the Physical Therapist Assistant

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours (Meets the first 4 weeks of Quarter V.)
Prerequisites: PS 202, PTA 237, PTA 240, PTA 242, EN 102

The foundation of physical therapy practice lies in the ability to problem solve for patients/clients with a variety of conditions. Students will expand their knowledge of legal, ethical and professional considerations in healthcare. Laws governing standards of practice will be emphasized in this hands-on application course. This course provides case-based learning to focus students on treatment planning and clinical reasoning in the practice environment. Course content will focus on practical roles and responsibilities of the entry-level physical therapist assistant and a variety of practice environments will be explored. All material from previous coursework will be used to successfully complete this course. An emphasis on collaborative teamwork and self-directed learning will transition students from the classroom to the practice environment.

PTA 258 Level II Clinical Education A

40 Clinical Hours per Week for 6 Weeks 8 Quarter Credit Hours
Prerequisites: PS 202, PTA 237, PTA 240, PTA 242, EN 102 and pass all skill competency exams

Level II Clinical Affiliation is the final phase of the PTA program. Working with physical therapy patients/clients, students will participate in data collection, planning and implementing treatment interventions, communicating effectively, and developing professional relationships. Students will work under the supervision of a PTA or PT who meets criteria as a clinical educator. The student and academic coordinator of clinical education will collaboratively select the clinical site. All clinical sites must have a signed contract with the College.

PTA 260 Senior Capstone

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisites: PTA 253, PTA 258 and Humanities or Arts/ Foreign Language core elective

This course provides students the opportunity to explore research that supports the practice of physical therapy and allow students to expand their knowledge of legal, ethical, and professional considerations in physical therapy with application to the clinical education they have completed. Students will select a topic of their choice and complete an evidence-based practice literature review. Students will complete a professional portfolio that summarizes and highlights their accomplishments in the PTA program. Students will present the final projects in a senior colloquium. Professional licensure requirements, resume writing, job searching, and preparation for the national licensure exam will be emphasized.

PTA 268 Level II Clinical Education B

40 Clinical Hours per Week for 6 Weeks, 8 Quarter Credit Hours
Prerequisites: PTA 253, PTA 258 and Humanities or Arts/ Foreign Language core elective

This second Level II Clinical Education experience will offer students further exposure to physical therapy practice. The second practice environment will provide a different experience for the student to continue to develop skills as a physical therapist assistant. Supervision in these environments will be shared with physical therapists and physical therapist assistants.

RESPIRATORY CARE

RC 110 Foundations of Respiratory Care

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours

This course provides an orientation to respiratory care and healthcare organizations. Topics will include the history of respiratory care and the development of the profession's core values and ethics, the respiratory therapist's role in patient assessment, education, and the promotion of wellness within diverse patient populations and communities. An overview of healthcare reimbursement, credentialing, licensure, accreditation, and evidence-based practices will be included.

RC 111 Introduction to Respiratory Care Clinical

1 Class Hour 2 Lab Hours 2 Quarter Credit Hours

This course prepares students for their clinical experience. Topics will include an orientation to clinical concepts such as pre-employment screening, background checks, immunizations, professionalism, ethics, diversity, effective communication, medical record review and charting, workplace safety, disease transmission and infection control practices, patent assessment skills, and patient confidentiality. Students will be provided the opportunity to take the American Heart Association Cardiopulmonary Resuscitation Healthcare Provider certification (CPR-C).

RC 120 Principles of Cardiopulmonary Physiology

3 Class Hours 3 Quarter Credit Hours
Prerequisites: RC 110, RC 111, BIO 100/101, MA 100/110

This course provides an in-depth analysis of the circulatory physiology of the heart and lungs. Applied respiratory chemistry, physical properties of fluids and gases, pulmonary mechanics, hematology, hemodynamics, and renal function will be included. Cardiopulmonary diagnostics and therapeutics such as pulmonary function testing, bronchoscopy, central venous lines, pulmonary artery catheters, arterial blood gases, electrocardiograms (ECGs), and cardiac arrhythmias will be introduced.

RC 121 Respiratory Care Pharmacology

1 Class Hour 2 Lab Hours 2 Quarter Credit Hours
Prerequisites: RC 110, RC 111, BIO 100/101, MA 100/110

This course focuses on the assessment, administration, and patient education associated with the safe delivery of pharmacological agents specific to the cardiopulmonary system. Drug classifications, dosage calculations, indications, and contraindications will be covered. Students will learn how to select the appropriate pharmacological agents, administer the agents utilizing the appropriate equipment and technique, and apply pre-, peri-, and post-assessment skills to determine the effectiveness and/or adverse effects associated with the treatment.

RC 130 Theory & Application of Respiratory Care I and Lab

3 Class Hours 4 Lab Hours 5 Quarter Credit Hours
Prerequisites: RC 120, RC 121, BIO 120/121
Co-requisite: RC 131

This course prepares students with the basic knowledge and skills for holistic patient assessment, diagnostic, and therapeutic modalities. Students will learn the fundamentals of evidence-based respiratory care assessment, protocols, and the safe use of equipment. Topics will include oxygen, humidification and aerosol therapies, airway management, manual ventilation, hyperinflation and bronchopulmonary hygiene procedures, noninvasive monitoring, and laboratory data analysis.

RC 131 Respiratory Care Clinical I

12 Lab Hours 4 Quarter Credit Hours
Prerequisites: RC 120, RC 121, BIO 120/121, Completion of preclinical screening and core competency testing
Co-requisite: RC 130

This entry Level I respiratory care practicum will allow students to develop the basic knowledge, skills, and core competencies introduced in the RC courses through observation and hands-on clinical experience. Students will perform evidence-based practices established by current clinical practice guidelines and published research.

RC 132 Respiratory Care Pathophysiology I

3 Class Hours 3 Quarter Credit Hours
Prerequisites: RC 120, RC 121, BIO 120/121
Co-requisite: BIO 122

This course provides students with the knowledge and critical thinking skills needed to effectively assess and treat patients with respiratory diseases including obstructive and restrictive disorders. Students will analyze clinical patient data and recommend the appropriate diagnostic and therapeutic procedures. Students will learn to develop patient care plans, respiratory care protocols, and disease management models.

RC 240 Theory & Application of Respiratory Care II & Lab

3 Class Hours 4 Lab Hours 5 Quarter Credit Hours
Prerequisites: RC 130, RC 131, RC 132, BIO 122
Co-requisites: RC 241

This course prepares students with more advanced knowledge and skills for holistic patient assessment, diagnostic, and therapeutic modalities. Students will develop more in-depth patient assessment skills utilizing both invasive and noninvasive procedures such as intubation, arterial blood gases, pulmonary function testing, pulse-oximetry, transcutaneous monitoring, capnography, bronchoscopy, central venous lines, pulmonary artery catheters, ECGs, and medical imaging.

RC 241 Respiratory Care Clinical II

12 Lab Hours 4 Quarter Credit Hours
Prerequisites: RC 130, RC 131, RC 132, BIO 122, Completion of preclinical core competency testing
Co-requisites: RC 240

This continuation of the entry Level I respiratory care practicum will allow students to develop more advanced knowledge, skills, and core competencies introduced in the RC courses through observation and hands-on clinical experience. Students will perform evidence-based practices established by current clinical practice guidelines and published research.

RC 242 Respiratory Care Pathophysiology II

3 Class Hours 3 Quarter Credit Hours
Prerequisites: RC 130, RC 131, RC 132, BIO 122

This course is a continuation of RC 132 with an emphasis on adult critical care, pediatric, and neonatal respiratory disorders. Students will analyze clinical patient data and recommend the appropriate diagnostic and therapeutic procedures. Students will learn to develop patient care plans, respiratory care protocols, and disease management models.

RC 252 Theory & Application of Respiratory Care III & Lab

3 Class Hours 4 Lab Hours 5 Quarter Credit Hours
Prerequisites: RC 240, RC 241, RC 242
Co-requisite: RC 253

This course provides an in-depth analysis of invasive and non-invasive mechanical ventilation. Students will develop the critical thinking and problem-solving skills needed to provide adequate ventilatory support to patients with cardiopulmonary disorders. Students will learn how to assess, monitor, and manage patients utilizing various modes of ventilation. Topics will include the indications and initiation of mechanical ventilation, the safe assembly and operation of positive pressure ventilation equipment, modes of mechanical ventilation, weaning, and the discontinuation of ventilatory support. Students will take a simulated entry-level preparation exam by the National Board of Respiratory Care (NBRC).

RC 253 Respiratory Care Clinical III

18 Lab Hours 6 Quarter Credit Hours
Prerequisites: RC 240, RC 241, RC 242, Completion of preclinical core competency testing
Co-requisite: RC 252

This advanced Level II respiratory care practicum will allow students to develop advanced knowledge, skills, and core competencies introduced in the RC courses through observation and hands-on clinical experience. Students will perform evidence-based practices established by current clinical practice guidelines and published research in critical care environments.

RC 254 Specialty Principles & Practice of Respiratory Care

2 Class Hours 2 Quarter Credit Hours
Prerequisites: RC 240, RC 241, RC 242

This course focuses on the advanced and specialty practices of respiratory care such as Advanced Cardiac Life Support (ACLS), Pediatric Advanced Life Support (PALS), Neonatal Resuscitation (NR), and extracorporeal membrane oxygenation (ECMO). Advanced modes of mechanical ventilation for the adult, pediatric, and neonatal patient populations will be included.

RC 261 Theory & Application of Respiratory Care IV & Lab

3 Class Hours 4 Lab Hours 5 Quarter Credit Hours
Prerequisites: RC 252, RC 253, RC 254
Co-requisite: RC 262

This course provides students with the knowledge and skills to practice respiratory care in neonatology, polysomnography, homecare, chronic care, and rehabilitation. A senior capstone project and simulated advanced-level preparation exam by the NBRC will be included.

RC 262 Respiratory Care Clinical IV

24 Lab Hours 8 Quarter Credit Hours
Prerequisites: RC 252, RC 253, RC 254, Completion of preclinical core competency testing
Co-requisite: RC 261

This advanced and specialty Level II respiratory care practicum will allow students to develop advanced and specialty knowledge, skills, and core competencies introduced in the RC courses through observation and hands-on clinical experience. Students will perform evidence-based practices established by current clinical practice guidelines and published research on the adult, pediatric, and neonatal patient populations within the critical care, homecare, chronic care, polysomnography, and rehabilitation care environments.

SCIENCE (MATH/SCIENCE CORE)

SCI 109 Logic and Reasoning

4 Class Hours 4 Quarter Credit Hours

This course introduces students to the basics of logic, the science of right reasoning, and its far-reaching applications in the empirical sciences. Topics covered are mechanical procedures for evaluating arguments, common flaws in reasoning, and statistical/causal reasoning. Emphasis throughout will be on practical applications: in the clinic, in the laboratory, and in the field. The goal is to provide students with a useful toolkit for thinking.

SCI 110 Environmental Science

4 Class Hours 4 Quarter Credit Hours

This course will focus on man's interaction with his environment. It will cover current issues like global warming, human population growth, and pollution.

SCI 114 Meteorology

4 Class Hours 4 Quarter Credit Hours

This course introduces students to meteorology. The course focuses on basic terminology of what weather is and how it acts and interacts with our environment. Students will learn how to read weather maps and weather information. The course will also teach the fundamental principles in weather forecasting.

SCI 304 Development of Western Science

4 Class Hours 4 Quarter Credit Hours

This course centers on the interaction of science, scientists, technology and society over the past five hundred years, primarily focusing on the development of Western science. The scientific method will be examined utilizing selected case studies. Underlying principles and methodologies of science will be illustrated by comparing and contrasting both the successes and failures of science. Factors affecting the acceptance and use of science and related technologies will be examined.

SCI 307 Understanding Science Through Photography

4 Class Hours 4 Quarter Credit Hours

This course integrates photography and science. Students will demonstrate their understanding of science concepts through photography and written artifacts. A key to understanding concepts in science is the ability to recognize their applications in everyday use. Problem solving and evaluating discussion board postings are also part of this course. Science concepts such as motion and forces are combined with physical elements of photography such as shutter speed, focal length, and aperture. Students will design and complete a capstone project that focuses on their area of study as it relates to science.

Students are expected to have basic knowledge of digital images and have the ability to upload photos. Cameras are not provided by NEIT.

SCI 320 Understanding Flight
4 Class Hours 4 Quarter Credit Hours

This course explores a variety of real world examples of objects moving through the air. While not an applied math course, the concepts that help understand the flight of objects are explored. Freefall, gliding, ballistics, and powered flight will be explained and studied. Both the historical development of manned flight as well as examples of flight in nature as exemplified by both birds and seeds will be investigated.

SCI 330 Our History and Future in Space
4 Class Hours 4 Quarter Credit Hours

A course investigating the history, current programs, and future of space exploration. Topics will focus on our solar system, the current search for water on Mars, and evidence of life on other planets and moons. Current events related to space exploration and Near Earth Objects will be incorporated whenever possible. Weekly writing assignments pertaining to weekly reading assignments will be required.

SCI 340 Introduction to Environmental Health
4 Class Hours 4 Quarter Credit Hours

Environmental health is the study of the interactions between humankind and our environment. This course will explore health issues arising from exposure to environmental hazards which are the direct result of human activity – such as energy production, industry, and agribusiness. Within the framework of environmental health and sustainability, students will explore core principles of toxicology, epidemiology and risk assessment; and will apply these concepts to the analysis of emerging environmental health problems in a rapidly growing and increasingly industrialized world.

SCI 350 Introduction to Genetics and Evolution
4 Class Hours 4 Quarter Credit Hours

No prior coursework in the subject is assumed. This course begins by looking at cells and what they are. Concepts such as mitosis and meiosis will be explored. What a gene is, how it functions, and how it may be mutated will be covered. The basic principles of genetics, including patterns of inheritance (Mendelian genetics) will be studied. Additional topics include the genetic basis of genotype and phenotype, natural selection, evolution, and speciation. Students will explore recombinant DNA and genetic engineering (genetically modified foods and livestock) and the future of genetics.

SOFTWARE ENGINEERING

SE 111 XHTML/JavaScript
2 Class Hours 4 Lab Hours 4 Quarter Credit Hours

In this course, students will gain an introduction to internet technologies and basic programming logic through the study of HTML 5, XHTML, Cascading Style Sheets, and Javascript. File organization and implementation of web graphics will be stressed throughout this course.

SE 114 Programming Essentials Using C++
2 Class Hours 4 Lab Hours 4 Quarter Credit Hours

C++ will be used as the vehicle to introduce flowcharting, control structures, calculations, interactive programming techniques, functions, and arrays. Students will learn to write high quality programs that implement techniques and theory necessary for business applications. Laboratory projects will grow in complexity as students gain hands-on experience. Both personal and business applications will be provided.

SE 124 Intermediate Programming Using C++
2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: SE 114, MA 100/110 with a grade of C or better

Using C++, students will study advanced topics in programming. Topics include string handling, intermediate array processing, passing by reference, pointers, and an introduction to creating, editing, and updating data files.

SE 133 Database Management
2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: NE 115

Given a business scenario, students will learn how to design and implement a relational database that will store and secure information according to industry standards. Students will become proficient in the Structured Query Language (SQL) and apply their skills on both MySQL and SQL Server. Students are taught to create and maintain database objects and to store, retrieve, and manipulate data.

SE 245 C#
2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: SE 124

This first programming course in C# introduces students to topics that may include an overview of a microcomputer system, an introduction to control structures, beginning the problem-solving process, completing the problem-solving process and getting started with C#, variables, constants, arithmetic operators, and assignment statements, built-in functions, program-defined value-returning functions, and program-defined void functions.

SE 251 Advanced JavaScript
2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisites: SE 111, SE 266

This course builds on the student's understanding of Javascript learned in previous courses. Javascript is the programming language used to extend the capabilities of the web browser to include animation, interactive forms, object control, and basic decision making. Topics addressed will include client side form validation, Object Oriented Programming, DOM Manipulation, data IO, persistence and the HTML 5.

SE 252 Systems Analysis and Design
2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: NE 115

An overall understanding of systems analysis skills and their application to industry are the key objectives of this course. Students learn the design of systems processing and controls, and develops skills to present the completed system to management.

SE 255 Advanced C#
2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: SE 245

Students will study advanced topics in C#. At the end of the course, students will be able to write C# programs that include classes, polymorphism, operator overloading, templates and exception handling. Special attention will be given to object-oriented design principles.

SE 256 Web Development Using .NET
2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisites: SE 111, SE 245

Students will learn the use of server-side scripting to create dynamic, database driven sites using the .NET platform.

SE 264 User Interface Design
2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: SE 251

This is a project-based course focused on developing a polished and logical user interface for a project of the student's choosing. Ideally, students will design and develop an interface for their capstone project. This course will instruct students in the logistical concerns inherent in designing an intuitive UI. Topics to be covered are: user experience, I/O and visual hierarchy. In addition, this course will provide insight into the fundamentals of utilizing Photoshop for front end production. Photoshop topics include wireframe and comp creation, image file formats, image compression, resizing, color space, resolution, pixel measurements, batch processing, and sprite sheets. Students will learn and utilize advanced CSS 3.0 techniques combined with JavaScript and jQuery to develop their designs into functional web pages.

SE 265 AS Capstone Project

6 Lab Hours 3 Quarter Credit Hours
Prerequisites: SE 255, SE 256, SE 266

This course provides an opportunity for each student to develop a substantial project in an area of interest. The resulting project, in conjunction with a faculty member, can include work conducted with companies in the area. The culmination of this course is a major presentation of project results.

SE 266 Web Development Using PHP and MySQL

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: SE 111

Students will learn the use of server-side scripting to create dynamic, database driven sites using PHP and MySQL. Emphasis is placed on applications that are user-friendly and secure.

SE 381 Test Driven Development

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: SE 255

Fixing bugs after a software product has been released is exponentially more expensive than fixing them earlier on in the development cycle. In this course, students explore the concepts of Test Driven Development to ensure that software works as expected from the moment the code is first written all the way through multiple refactorings.

SE 385 Java

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: SE 255

Students will be introduced to the concepts of object-oriented programming using Java. In addition to a further development of programming constructs and concepts, students will be exposed to programming methods unique to object oriented languages such as classes, inheritance and polymorphism.

SE 391 Programming Mobile Devices I – Android

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: SE 385

This course will teach the fundamentals of Android programming. Throughout the course, students will be using Java to create applications demonstrating various aspects of the Android programming environment. Multiple topics will be addressed to prepare students to create useful applications.

SE 394 Algorithms in Software Engineering

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: SE 385

This course includes an overview of the algorithms and data structures used in software applications today. Topics include but are not limited to linked lists, queues, stacks and trees. Students will learn to analyze the complexity of different algorithms and gain an appreciation for efficient computing.

SE 396 Advanced PHP Programming

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: SE 266

Students will learn how to create robust, object-oriented web applications in PHP. The course includes in-depth coverage of stored procedures in MySQL as well as an overview of popular application frameworks.

SE 398 Advanced SQL

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: SE 133

Students will study advanced topics in SQL, including views, triggers, indexes and stored procedures. The course emphasizes SQL dos and don'ts for these topics and students are introduced to a multitude of database standards: Military, ANSI, ISO, and Industry.

SE 402 Design Patterns

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: GDS 252 or SE 394

In software engineering, a design pattern is a general repeatable solution to a commonly-occurring problem in software design. Design patterns can speed up the development process by providing tested, proven development paradigms. This course will introduce students to this state-of-the-art software development methodology.

SE 407 Advanced .NET

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisites: SE 255, SE 256

Students will use the .NET framework to develop highly interactive and robust web applications in teams of two or three students. Robustness of the applications is ensured by utilizing database layers, component based development and proper use of advanced error handling techniques.

SE 408 Programming Mobile Devices

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisites: GDS 131 or SE 385

Students will learn how to develop applications for mobile devices such as cell phones, handhelds (PDAs) and tablets. Students will use languages such as C#, Obj-C, C++ or Java to develop applications that will run on a mobile device. Topics include memory management, user interfaces, storage cards, sounds, and graphics.

SE 409 Programming Mobile Devices II – IOS

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: SE 255

Students will learn how to develop applications for mobile devices such as cell phones, handhelds (PDAs) and tablets. Students will use languages such as C#, Obj-C, C++ or Java to develop applications that will run on a mobile device. Topics include memory management, user interfaces, storage cards, sounds and graphics.

SE 414 Introduction to Senior Project

3 Class Hours 3 Quarter Credit Hours
Prerequisites: SE 398, SE 407

The objective of the senior project is to integrate skills learned during the students' time at New England Tech. Within a team of at least 2 and no more than 4 students, a real world application is developed over a period of 20 weeks. The Introduction to the Senior Project spans the first 10 weeks of this period and in this class, a proposal, a functional specification and a database design is created and implemented. In addition, Microsoft Project is used to develop and create a Gantt Chart that specifies in detail how the project will be implemented during the last 10 weeks of the senior project. The final project will be presented to the faculty and is evaluated by three faculty members.

SE 417 Software Security

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: SE 385

This course studies known problems in the field of software security. The focus will be on awareness of security risks in software development and students will learn methods to avoid these issues when they write their own applications. Topics include unvalidated input, buffer overflows, injection flaws, insecure storage and improper error handling.

SE 419 Big Data

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: SE 398

Students will be introduced to Big Data concepts such as NoSQL, data storage, MapReduce and visualization. Students will study big data in the context of a number of different areas including Internet search, finance and business informatics.

SE 423 Operating Systems

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: SE 385

This course covers basic operating system concepts and relates them to important tasks and activities in software development. The operating system is a resource manager and its design must be intimately tied to the hardware and software resources that it manages. These resources include processors, memory, secondary storage (such as hard disks), other I/O devices, processes, threads, files, databases and more. This course addresses interactions with the operating system from the perspective of a software engineer to utilize these resources through process management and concurrency, memory management strategies and file system management.

SE 425 Senior Project

6 Lab Hours 3 Quarter Credit Hours
Prerequisite: SE 414

This course provides an opportunity for each student to develop a substantial project in an area of interest as proposed in SE 414. The resulting project, in conjunction with a faculty member, can include work conducted with companies in the area. The culmination of this course is a major presentation of project results.

SE 426 Web Services

3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisite: SE 255

Students will learn how to design and build web services using the .NET framework. The course covers an introduction to web services as well as topics such as XPath, Web Services Description Language (WSDL), JSON and Windows Communication Foundation.

SE 429 Data Analytics

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: MA 300, SE 419

Using the programming Language R students will learn how to prepare, analyze and visualize large datasets. An emphasis is placed on R's built-in statistical and machine learning functions.

SOCIOLOGY (SOCIAL SCIENCES CORE)

SO 203 Social Problems

4 Class Hours 4 Quarter Credit Hours

This course will examine contemporary social issues from multiple perspectives. Attempts to see the ethics, the arguments and the policy outcomes involved in problems such as drug abuse, crime, poverty and the global environment.

SO 220 Internet and Society

4 Class Hours 4 Quarter Credit Hours
Prerequisite: B- or better in EN 102

Internet and Society is an online course that focuses on the impact of the Internet on our lives. The goal of this course is to encourage students to think deeply and critically about the reality of living in a technology-driven society and how technological change influences work, families, social lives, education, and privacy.

SO 231 Crime and Deviance

4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 102

This course traces the historical development of crime and deviance. A review of the social, physiological, and psychological theories of crime are examined. Topics such as the history of policing and the history of corrections are also reviewed.

SO 321 Sociology of Aging

4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 331 or its equivalent

This course provides an overview of the significant sociological perspectives, social issues, and social science research pertaining to the phenomenon of aging in society. The course will 1) examine the major theories of social aging, 2) analyze the changing demographic trends and the political economy issues facing aging societies; 3) describe how the broader societal context affects the nature of family relationships, community involvement, and the experiences of retirement and widowhood among the elderly; and 4) examine the current issues in health and social service delivery for care of the elderly.

SO 333 Sport in Society

4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 331 or its equivalent

While most people see sport as an escape from life's pressures, in reality, sport plays a significant role in modern life and is connected to issues of power, money and culture. In this course, students will look at modern sport practices as they reflect these dimensions of society. Students will look substantively at issues such as discrimination in sport, violence in sport, money in sport, and sport and politics. The course will help students gain a more complete understanding of this increasingly important social institution.

SO 461 Language and Society

4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 331 or its equivalent

This course provides students with knowledge about the role that language plays in our cognitive and social development in order to give us greater power over our interactions with others at home, at work, and elsewhere. Topics covered include: how we speak and why; is language biological or cultural; do men and women speak differently; and what is the connection between language and thought.

SPANISH (ARTS/FOREIGN LANGUAGE CORE)

These courses are designed for students with no prior knowledge of Spanish.

SP 201 Introduction to Spanish

4 Class Hours 4 Quarter Credit Hours

This course will introduce students to the Spanish language with an emphasis on the use of Spanish in the workplace. Students will learn to communicate with customers and other employees in Spanish with a focus on basic vocabulary words used in everyday interactions at the workplace. Topics covered include: conversational skills as well as key principles of Spanish grammar and cultural traditions in Spanish-speaking countries. The course is designed for students with no prior knowledge of Spanish.

SP 203 Spanish for Healthcare Workers

4 Class Hours 4 Quarter Credit Hours

This course will introduce students to the Spanish language with an emphasis on the use of Spanish in the workplace. Students will learn to communicate with Spanish speaking patient and family and other employees in Spanish with a focus on basic vocabulary words used in everyday interactions at the workplace. While each class will emphasize conversational skills, the course will also cover some key principles of Spanish grammar and provide some exposure to a variety of cultural traditions in Spanish-speaking countries.

SOCIAL SCIENCES (SOCIAL SCIENCES CORE)

SS 140 Criminal Investigations

4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 101 or EN 110

In this course, students will get exposure to a wide range of interpersonal and scientific factors that are explored by criminal investigators in their efforts to support hypotheses developed to solve a variety of crimes. Some of the course topics will include the appropriate collection of evidence at a crime scene, techniques for interviewing witnesses and suspects, the role of the crime lab, the science of fingerprinting, forensic medicine, and the preparation of testimony that leads to the conviction of criminals.

SS 201 American Government in Action

4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 102

This is an introductory course that will help students understand how the pieces of American government fit together,

and how politics continuously affects their lives. Students will examine the roles of interest groups, the media, political parties and the three branches of government. Class discussions about relevant and current political issues will be encouraged.

SS 203 Terrorism and National Security
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 102
This course examines the challenge contemporary terrorism presents for U.S. national security. It investigates the causes of terrorism and inquires into the motives, objectives, methods, and effectiveness of contemporary terrorist groups with an emphasis on al Qaeda. Analysis of the determinants of American counter-terrorism policies and evaluation of the effectiveness of these initiatives are central themes of the course. As such, evaluation of the roles the invasion of Afghanistan, the Iraq War, covert operations, domestic and foreign internal security initiatives, and global law enforcement operations have played in addressing the terrorist threat are major points of emphasis.

SS 204 Juvenile Justice System in America
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 102
The course is designed to explore the components of the juvenile justice system in America. The various features, characteristics, policies and concerns about the juvenile justice system are carefully examined. As part of the review, adolescent behavior and influence of the family dynamic will be discussed. The detention of juveniles, the various programs focused on the diversion of youths from the juvenile justice system, rehabilitation programs and prevention programs will also be reviewed.

SS 206 Constitutional Values in the 21st Century
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 102
This course is an introduction to constitutional law and will utilize a historical examination of major United States Supreme Court decisions to better understand contemporary federal and state judicial interpretations of constitutional theory and individual freedoms. It will focus on government powers, the federal court system and judicial review. It will also closely examine those individual freedoms guaranteed under the Bill of Rights, and will critically analyze the controversial issues of gun control and the death penalty. Students will also understand how the interpretation of the Constitution involves the application of individual and societal values. These topics will be reinforced through case briefs, persuasive essays, current event worksheets, group activities, debates and media presentations.

SS 221 Technology and American Life
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 102
The course, based on abstract thinking and analysis, examines the interactive relationship between technology and society over historic time and across geographic space. The course will address basic questions about technology and its place in society. Students will be able to evaluate the impact of social change on their lives, and the impact of their technology on changing the social system.

SS 302 The United States Legal System
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 331 or its equivalent
This course will critically analyze whether the American legal system is truly providing equal justice for all members of our society. Students will examine how legal disputes are handled and the influences that shape the structure, process and personnel of the legal system.

SS 303 Communication in the Global Workplace
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 331 or its equivalent
Core Fulfillment: Both Communications Core and Social Sciences Core
This course is designed to acquaint students with intercultural communication issues that arise in the workplace, culminating in a final project: making a business/occupational presentation to an audience from another culture.

SS 304 Digital Media & the Law
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 331
In this course, students will examine how the existing legal structure within digital and social media operates and understand how the global shift to digital media has profoundly affected the production and control of information from a global and domestic perspective. The course is designed to introduce students to legal issues that are most relevant to careers in digital media and to individuals using digital and social media for personal interests. These topics include information access and protection, intellectual property, defamation, invasion of privacy, commercial speech, jurisdiction, internet regulations, and, of course, freedom of expression.

SS 330 Contemporary Social Issues
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 331
This course will examine contemporary social issues from multiple perspectives. Attempts to see the ethics, the arguments and the policy outcomes involved in problems such as drug abuse, crime, poverty and the global environment.

SS 350 Everything is a Negotiation
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 102
Program Restriction: This course not open to students in the Business Management program.
This course is intended to help students develop the skills they need to successfully negotiate their way through their work situations. Students will practice both face-to-face negotiations and negotiations carried on electronically.

SURGICAL TECHNOLOGY

ST 98 Advanced Clinical Review
6 Lab Hours 3 Quarter Credit Hours (5 Week Course)
The credits for ST 98/ST 99 do not count for degree requirements. Course to be taken at the discretion of the Department Chairperson.
This course is a mandatory course for students who have had a disruption of continuity between the clinical experiences and the ST Lab courses. It is designed to strengthen and reinforce the advanced lab skills necessary for entry-level placement. The review is an advanced preparatory course. Students are given the opportunity to work as a team in performing mock surgeries. This course is offered on a pass/fail basis.

ST 99 Clinical Review
6 Lab Hours 3 Quarter Credit Hours
The credits for ST 98/ST 99 do not count for degree requirements. Course to be taken at the discretion of the Department Chairperson.
This course is a mandatory course for students who have had a disruption of continuity between the clinical experiences and/or the ST Lab courses. It is designed to strengthen and reinforce the lab skills necessary for entry-level clinical placement. The review is a clinical preparatory course. This course is offered on a pass/fail basis.

ST 101 Introduction to Surgical Technology
2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
An introduction to surgical technology, selected aspects of the roles of the perioperative team, types of hospitals, and insurances will be presented. Principles of aseptic technique, standard precautions, and surgical positions are presented in class and simulated laboratory experience. Perioperative routines including understanding a health history, risk factors, informed consent, patients' rights, physical diagnosis skills, and scrubbing, gowning, and gloving are topics covered.

ST 120 Surgical Instrumentation

1 Class Hour 2 Lab Hours 2 Quarter Credit Hours
Prerequisites: ST 101, HS 102, MGM 102

The care and handling of surgical instrumentation, instrument classification and recognition will be presented. The various types of sterilization methods as well as the proper manner to prepare surgical instruments for decontamination and sterilization will be included. Lab skills will include how to properly load and unload a knife handle, how to pass instruments correctly, and how to wrap instruments for sterilization.

ST 130 Surgical Procedures I

4 Class Hours 4 Quarter Credit Hours
Prerequisites: ST 120, BIO 100/101, BIO 120/121, BIO 122

Fundamentals of surgical patient care essential to the work in the surgical suite are presented in class. Selected topics included are wound healing, environmental design and safety, biohazards, care of specimens, preparing and functioning in a sterile field, needle and suture classification, draping, legal responsibilities, and skill acquisition in gowning and gloving. Roles of team members in the operating room are highlighted.

ST 131 Surgical Procedures I Lab

6 Lab Hours 3 Quarter Credit Hours
Prerequisites: ST 120, BIO 100/101, BIO 120/121, BIO 122

Students practice topics covered in ST 130. Skill acquisition and instrument handling are stressed. The on-campus laboratory is open to students for additional practice.

ST 200 Surgical Procedures II

4 Class Hours 4 Quarter Credit Hours
Prerequisites: Completion of the first academic year including liberal arts courses

The knowledge, skills, and professional behavior of a surgical technologist are developed in this course. It describes common health problems requiring surgical intervention, surgical procedures, interoperative complications, instrumentation supplies, and aseptic and special techniques. Surgery of the abdomen, genitourinary, operative obstetrics, gynecological surgery, cancer (breast) surgery, orthopedic surgery, and interoperative medications are some of the topics presented.

ST 201 Surgical Procedures II Lab

6 Lab Hours 3 Quarter Credit Hours (5 Week Course)
Prerequisites: Completion of first academic year and eligible for clinical placement.

Laboratory practice of topics presented in ST 200 Surgical Procedures II leading to skill acquisition.

ST 203 Professional Communication Skills

1 Class Hour 1 Quarter Credit Hour (5 Week Course)
Prerequisites: Completion of the first academic year including liberal arts courses and completion of ST 201

Co-requisite: ST 204

The course will cover topics in conflict resolution, teamwork, and group dynamics. Clinical topics will also be discussed.

ST 204 Operating Room Laboratory I

12 Lab Hours 4 Quarter Credit Hours (5 Week Course)
Prerequisites: Completion of the first academic year including liberal arts courses and completion of ST 201
Co-requisite: ST 203

Practicum is a pre-arranged scheduled experience in the operating room for student surgical technologists. It provides students with the actual experience in the following areas: teamwork, flexibility, organization, economy of time, and motion and materials. The preparation of all supplies and equipment used for surgical procedures in the operating room is also included.

ST 205 Advanced Topics in Surgical Technology

1 Class Hour 1 Quarter Credit Hour
Prerequisite: ST 200

This course includes basic terms and principles of computers, electricity, physics, disaster planning, and robotics as they relate to safe patient care practices in the surgical environment.

ST 220 Surgical Procedures III

4 Class Hours 4 Quarter Credit Hours
Prerequisite: ST 200

This course is a continuation of ST 200. Students have further study in common health problems and surgical specialties such as, thoracic, vascular, reconstructive, plastic, eye, and others. Clinical experience in the operating room provides an opportunity to develop skill in the full spectrum of the work. An overview of the roles of first and second scrub, first assistant, circulator, and the overall work of the surgical service is included.

ST 222 Operating Room Laboratory II

24 Lab Hours 8 Quarter Credit Hours
Prerequisites: HS 201, ST 200, ST 203, ST 204
Co-requisite: ST 223

A pre-arranged, scheduled experience in the operating room for student surgical technologists. It provides students with actual experience in teamwork, flexibility, organization; economy in time, motion and materials; and preparation of supplies and equipment used in the operating room. Students will experience scrubbing first and second scrub roles on surgical procedures under the supervision of operating room personnel or instructor.

ST 223 Surgical Seminar I

1 Class Hour 1 Quarter Credit Hour
Prerequisites: ST 200, ST 203
Co-requisite: ST 222

Current topics in surgery will be presented. In addition, students will combine their surgical technology theory with their clinical experience through various methods of instruction.

ST 230 Operating Room Laboratory III

12 Lab Hours 4 Quarter Credit Hours (5 Week Course)
Offered in the Winter and Summer Quarters only
Prerequisites: Completion of Quarters I-V including all liberal arts courses
Co-requisite: ST 233

Students gain clinical experience in affiliated hospital operating rooms during various surgical procedures. Scrub skills during these various procedures are the focus of this experience. Previously learned concepts and procedures are applied daily during operative procedures.

ST 232 Advanced Applications of Surgical Technology

6 Class Hours 6 Quarter Credit Hours
Offered in the Winter and Summer Quarters only

This course is the culmination of the surgical technology program of study. Knowledge from all core ST courses is integrated for a total application of principles acquired in the technology. Fast-breaking developments in the field will be approached as well as review of fundamental axioms. Only students who have completed Quarters I through V may enroll.

ST 233 Surgical Seminar II

2 Class Hours 2 Quarter Credit Hours (5 week course)
Prerequisite: Completion of Quarters I-V including all liberal arts courses
Co-requisite: ST 230

This is a continuation of ST 223. Students will be required to do a research paper on a surgically-related topic. A more in-depth look at the surgical procedures that students are performing in the field will be discussed.

TRANSPORTATION TECHNOLOGY

TT 105 Introduction to Transportation Technology

2 Class Hours 2 Quarter Credit Hours

This course is designed for incoming students to familiarize them with the operation of the Automotive/ Automotive Collision Repair labs and programs. Students will be introduced to the potential job opportunities and the working environments

of the different Transportation Technologies. Students will become familiar with the tools used in the repair of transportation vehicles and safety practices to be used. Students will also practice information retrieval as well as record keeping. Topics covered are safety in the lab, measuring tools, service manuals, computerized information retrieval, tool identification and use, and fastener identification and uses. Students will also be asked to demonstrate proficiency using shop equipment such as lifts, racks, jacks and jack stands.

VETERINARY TECHNOLOGY

VET 110 Introduction to Veterinary Technology

4 Class Hours 4 Quarter Credit Hours

This course prepares veterinary technology students with the foundational knowledge necessary to succeed in veterinary technology courses as well as in the role of veterinary technicians as members of the veterinary healthcare team. It includes the role of veterinary technicians in clinics, hospitals, and research labs; medical terminology; professional ethics and legal regulation; pet loss, bereavement and euthanasia; occupational hazards; and professional organizations.

VET 112 Veterinary Anatomy and Physiology I

3 Class Hours 3 Quarter Credit Hours

This course is the first of two courses where veterinary technology students will comprehensively study the structure and function of the animal body. Topics will include the dynamic equilibrium between the animal's body and the external environment, levels of organization in the animal body, properties and distribution of body fluids, the components of blood, and the integumentary, musculoskeletal, and cardiovascular systems.

VET 113 Veterinary Anatomy and Physiology I Lab

3 Lab Hours 1 Quarter Credit Hour

The laboratory is designed to assist in learning the material presented in Veterinary Anatomy and Physiology I lecture through hands-on activities which will include examination of cells and tissues under a microscope, bones, anatomical models, and dissection of animal specimens. Units covered include general introductory material, histology, integumentary system, skeletal system, muscular system, and the cardiovascular system.

VET 120 Animal Management

4 Class Hours 4 Quarter Credit Hours
Prerequisites: VET 110, VET 112, VET 113

This course covers the care and management of companion animals, exotic animals, ruminants, horses, and poultry. Emphasis will be on husbandry including handling, care, feeding, breeding, behavior, and disease prevention.

VET 122 Veterinary Anatomy and Physiology II

3 Class Hours 3 Quarter Credit Hours
Prerequisites: VET 110, VET 112, VET 113

A continuation of Veterinary Anatomy and Physiology I, this course concentrates on the digestive system, respiratory system, endocrine system, urinary system, and reproductive systems. Also covered are the special senses, and the anatomy and physiology of birds, reptiles, and amphibians.

VET 123 Veterinary Anatomy and Physiology II Lab

3 Lab Hours 1 Quarter Credit Hour
Prerequisites: VET 110, VET 112, VET 113

The laboratory is designed to assist in learning the material presented in Veterinary Anatomy & Physiology II lecture through hands-on activities which will include preparation and examination of blood cells under a microscope, anatomical models, and dissection of animal specimens. Units covered include the sensory organs, nervous system, respiratory system, digestive system, urinary system, reproductive system, endocrine system, and avian anatomy.

VET 130 Veterinary Pharmacology

3 Class Hours 3 Quarter Credit Hours
Prerequisites: VET 120, VET 122/123, MA 109 with a C or better

Principles of veterinary pharmacology including pharmacokinetics, pharmacodynamics, drug indications, side effects, contraindications and practical applications of drugs including drug handling, dosing calculation, administration methods, prescription writing, and terminology.

VET 137 Laboratory Animal Technology and Lab

2 Class Hours 3 Lab Hours 3 Quarter Credit Hours
Prerequisites: VET 120, VET 122/123

This course introduces the field of laboratory animal science, with an emphasis on the biology, breeding, care, management, health, research use, and welfare of laboratory animal species. The laboratory portion of the course reinforces important concepts and principles, and engages students in the following: measurements in laboratory animal science, biomethodology of the mouse, rat, and rabbit including handling, restraint,

oral gavage, injections, anesthesia, surgical techniques, euthanasia, necropsy, and other techniques. Practical experience through rotations at off-campus facilities may be required.

VET 138 Veterinary Practicum I

6 Lab Hours 2 Quarter Credit Hours
Prerequisites: VET 240, VET 242/243, VET 244, and permission of Veterinary Technology Program Director
Co-requisite: VET 248

Practicum: This is an introductory structured practical experience in the application of veterinary technology at an off-campus site which may include a veterinary hospital, clinic, animal research facility, or other appropriate site. Students work under the supervision of a veterinarian or credentialed veterinary technician while mastering the appropriate "essential skills" required by the American Veterinary Medical Association. Practical experience will include rotations through local veterinary facilities and may occur on days/times other than scheduled class days.

VET 240 Animal Diseases

4 Class Hours 4 Quarter Credit Hours
Prerequisites: VET 130, VET 137, VET 250, BIO 116, BIO 122

This course covers the principles of disease as they apply to veterinary medicine. Topics include classification of causes of disease, response to injury, sources and transmission of agents of disease, common diseases of companion, farm, avian, and exotic animals. Additionally, students will study veterinary parasitology, toxicology, and the epidemiology of major zoonotic diseases.

VET 242 Animal Nursing

4 Class Hours 4 Quarter Credit Hours
Prerequisites: VET 130, VET 137, VET 250, BIO 116, BIO 122
Co-requisite: VET 243

This course introduces clinical skills for the veterinary technician. Topics include handling and restraint, general nursing care of the patient, examination room procedures, drug administration, client education and communication. Additional clinical nursing skills covered include venipuncture, bandaging, electrocardiograph recording, and other clinical techniques. Veterinary nursing procedures and teamwork are emphasized.

VET 243 Small Animal Nursing Lab

3 Lab Hours 1 Quarter Credit Hour
Prerequisites: VET 130, VET 137, VET 250, BIO 116, BIO 122
Co-requisite: VET 242

This laboratory provides hands-on experience in clinical skills for the veterinary technician including handling, restraint, general nursing care of the patient, examination room procedures, drug administration, client education, and communication. Additional clinical nursing skills covered include venipuncture, bandaging, electrocardiograph recording, and other clinical

techniques. Veterinary nursing procedures and teamwork are emphasized. Practical experience through rotations at off-campus facilities may be required.

VET 244 Veterinary Anesthesia and Dentistry Lab

3 Lab Hours 1 Quarter Credit Hour
Prerequisites: VET 130, VET 137, VET 250, BIO 116, BIO 122

This course provides knowledge and practical experience in dentistry and anesthesia. Topics include parts and preparation of the anesthesia equipment and related materials to ensure safe and reliable operation; knowledge of anatomy and physiology as it applies to anesthesia; dental anatomy, nomenclature and charting; equipment, instruments and supplies as they relate to dentistry; prophylaxis techniques; dental radiography; pathophysiology of periodontal disease; and home care for the client.*Practical experience through rotations at off-campus facilities may be required.*

VET 248 Veterinary Practicum II

6 Lab Hours 2 Quarter Credit Hours
Prerequisite: Permission of Veterinary Technology Program Director
Co-requisite: VET 138

Practicum: This continuation of VET 138 is a practical experience in the application of veterinary technology at an off-campus site which may include a veterinary hospital, clinic, animal research facility, or other appropriate site. Students work under the supervision of a veterinarian or credentialed veterinary technician while mastering the appropriate essential skills required by the American Veterinary Medical Association. Practical experience will include rotations through local veterinary facilities and may occur on days/times other than scheduled class days.

VET 250 Large Animal Nursing Laboratory

3 Lab Hours 1 Quarter Credit Hour
Prerequisite: VET 120, VET 122/123
Co-requisite: VET 137

This laboratory provides hands-on experience in equine and bovine techniques including handling and restraint, husbandry, collecting diagnostic specimens, bandaging, and equine radiography. Practical experience through rotations at off-campus farms will be required.

VET 252 Veterinary Imaging

3 Class Hours 3 Quarter Credit Hours
Prerequisites: VET 138, VET 248, VET 254, VET 262, VET 263
Co-requisite: VET 253

This course provides knowledge of the basic concepts of veterinary radiology including x-ray generation, image recording, film handling and processing, positioning and restraint, radiation safety, and special procedures.

VET 253 Veterinary Imaging Laboratory

3 Lab Hours 1 Quarter Credit Hour
Prerequisites: VET 138, VET 248, VET 254, VET 262, VET 263
Co-requisite: VET 252

This laboratory provides hands-on experience with the entry-level skills for veterinary technicians in radiology including x-ray generation, image recording, film handling, film processing, positioning, restraint, special procedures, radiation safety, ultrasonography and endoscopy.

VET 254 Veterinary Anesthesia and Surgical Nursing and Lab

4 Class Hours 3 Lab Hours 5 Quarter Credit Hours
Prerequisites: VET 240, VET 242, VET 243, VET 244

This course provides knowledge and practical experience in surgical assisting, postoperative care, and anesthesiology. Topics include anesthesia administration and monitoring, anesthetic and surgical instrumentation, preparation of the surgical patient, preparation of the surgeon and surgical assistant, dentistry, and postoperative monitoring. Practical experience may include rotations through local veterinary facilities and may occur on days/times other than scheduled class days. Overtime in the lab may occur due to prolonged patient recovery from anesthesia.

VET 258 Veterinary Practicum III

6 Lab Hours 2 Quarter Credit Hours
Prerequisites: VET 248, VET 254, VET 262, VET 263 and permission of Veterinary Technology Program Director
Co-requisite: VET 268

Practicum: This continuation of VET 248 is a practical experience in the application of veterinary technology at an off-campus site which may include a veterinary hospital, clinic, animal research facility, or other appropriate site. Students work under the supervision of a veterinarian or credentialed veterinary technician while mastering the appropriate essential skills required by the American Veterinary Medical Association. Practical experience will include rotations through local veterinary facilities and may occur on days/times other than scheduled class days.

VET 260 Veterinary Management

3 Class Hours 3 Lab Hours 4 Quarter Credit Hours
Prerequisites: VET 138, VET 248, VET 254, VET 262, VET 263

This course provides knowledge of economics in veterinary practice, management of veterinary facilities, technician utilization, marketing, record keeping, inventory control, professional ethics, malpractice issues, medical emergency management, OSHA standards, practice safety, client communication, and bereavement.

VET 262 Veterinary Clinical Laboratory Procedures

4 Class Hours 4 Quarter Credit Hours
Prerequisites: VET 240, VET 242, VET 243, VET 244
Co-requisite: VET 263

This course provides study in the principles and procedures for the veterinary practice laboratory. Topics include veterinary parasitology, microbiology, immunology, hematology, cytology, urinalysis, and blood chemistries.

VET 263 Veterinary Clinical Laboratory Procedures Laboratory

3 Lab Hours 1 Credit Hour
Prerequisites: VET 240, VET 242, VET 243, VET 244
Co-requisite: VET 262

This laboratory provides hands-on experience in veterinary clinical laboratory procedures including veterinary parasitology, microbiology, immunology, hematology, cytology, urinalysis, and blood chemistries.

VET 268 Veterinary Practicum IV

6 Lab Hours 2 Quarter Credit Hours
Prerequisite: Permission of Veterinary Technology Program Director
Co-requisite: VET 258

Practicum: This continuation of VET 258 is a practical experience in the application of veterinary technology at an off-campus site which may include a veterinary hospital, clinic, animal research facility, or other appropriate site. Students work under the supervision of a veterinarian or credentialed veterinary technician while mastering the appropriate essential skills required by the American Veterinary Medical Association. Practical experience will include rotations through local veterinary facilities and may occur on days/times other than scheduled class days.

VIDEO GAME DESIGN

VGD 133 3D Modeling I

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: GMW 112 or GDS 115

This course will cover the fundamentals of rendering, animation, and modeling using Autodesk's 3ds Max. It will start with the application's basics, then go on to discuss many of the key features of 3ds Max, including an emphasis on creating low-polygon static objects optimized for video game use. The topics taught in this course include creating and modifying a mesh through polygon and spline modeling, applying modifiers, unwrapping an object and creating custom texture maps.

VGD 242 3D Modeling II
2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: VGD 133
This course will provide advanced training in computer modeling and rendering and animation. Topics covered along with advanced modeling techniques include advanced materials, lighting, and levels of detail. Autodesk's Mudbox will also be incorporated into the model development pipeline for texture map and model creation.

VGD 244 Unity I
2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
This course will provide a foundation in the tools, techniques, and production methods for creating game environments and successfully using Unity 3D in a production situations.

VGD 253 3D Modeling III
2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: VGD 242
The emphasis of this course is the design and development of low-polygon 3D characters. The course's emphasis will be on character rigging for animation utilizing standard bones along with 3ds Max's Biped and CAT. Rigging fundamentals will include forward and inverse kinematics, vertex assignment and mesh weighting. Finished models with rigs will be ready for creating animations and implementation into game engines.

VGD 255 Unity II
2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: VGD 244
This course will expand the use of the Unity 3D tool in a production. Students will use JavaScript, C#, to enhance interactivity and gameplay, while also deploying characters, objects, sounds and textures required for the development of a basic 3D game.

VGD 257 Animation I
2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
This course addresses the core fundamentals, history and terminology of traditional animation using modern video game and interactive media production techniques as the context. The goal of this course is not only to teach students technical skills, but also to help them form a rich understanding of animation concepts that can be utilized regardless of future technological capabilities and limitations. Examples of animation from film, television, games and websites will be shown and discussed frequently throughout this course to demonstrate and reinforce key points. Industry standard 2D and 3D content creation tools will be utilized to aid students in demonstrating their understanding of the topics covered.

VGD 259 Storyboard and Design
2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
This course introduces students to the concepts and techniques of visual storytelling through storyboard rendering. Students will execute storyboards of simple sequence events through to cinematic scenes. The class also covers storyboard pitching and presentation techniques. Students will also learn basic principles of design, composition and layout.

VGD 263 Digital Audio and Video Editing
2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
This course addresses the importance and need in today's fast-paced digital world, to create an effective demo reel of work. The goal of this course is to teach not only the technical skills required to produce a demo reel, but to also help students in evaluating their work and how to put their best foot forward. Examples of successful demo reels from large design and gaming firms to independent artists and producers will be shown and used to illustrate key points of what makes certain demo reels stand out from the others. Learning diverse concepts from transitioning and pacing to determining the correct audio to be used, will all factor into creating a successful demo reel. Students will come away from this course with an outstanding showcase of their work that can be delivered over multiple platforms on the Internet including YouTube and Vimeo.

VGD 371 Advanced 3D Modeling
2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: VGD 253
Expanding on previously learned modeling techniques, students will create fully renderable game assets through a series of projects that increase in complexity. Projects include complex UV and texture mapping techniques, baking detail from hi-poly models onto low-poly assets, and collision models. The emphasis in this course will be on game environments and assets.

VGD 372 UI/UX Design Principles
2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: GMW 112, VGD 259
The success of a game is often dependent on the functionality of the interface between the player and the platform's input device. Developing an understanding of how players interact with the game interface is key to designing a successful User Interface (UI) and in the creating a satisfactory User Experience (UX). This class will explore the background, principles and concepts of user-centered design and the Human Computer Interface (HCI) in relation to human ergonomics and typical cognitive tendencies in design perception.

VGD 380 3D Digital Sculpting
2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: VGD 371
Using 3D modeling and sculpting programs together with 3D painting tools can yield amazing game assets with detail not easily achievable with standard modeling practices. Building on existing modeling skills, this course will immerse students in the professional modeling pipeline for model asset creation for games.

VGD 384 Game Engines
2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisites: GDS 243, GDS 268, VGD 244, VGD 255, VGD 259
This course will use a game engine with a variety of tool sets as the principle context for exploring modern video game and interactive media production techniques. The goal of this course is not only to teach students technical skills, but also to help them form a rich understanding of workflow concepts that can be utilized regardless of future technological capabilities and limitations. Examples of games and websites will be shown and discussed frequently throughout this course to demonstrate and reinforce key points. Industry standard 2D and 3D content creation tools will also be utilized to aid students in demonstrating their understanding of the topics covered.

VGD 390 Advanced Animation I
2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisites: VGD 257, VGD 371
Creating smooth, realistic 3D animations is an art unto itself. Students will concentrate on the application of animation principles and techniques in creating refined prop and character animations. Investigations into timing and spacing will be explored as well as techniques for creating actions, reactions and expressing emotions will be explored.

VGD 392 3D Scripting & Advanced Rigging
2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: VGD 371
Utilizing the native scripting languages of 3D modeling software, technical artists can create simple to complex tools and scripts to aid in the creation of models, animations and processes. Students will use 3D modeling scripts within modeling programs to manipulate meshes, control objects and actions. Building on these scripts, students will apply scripts to control advanced rigging of props and characters.

VGD 394 Game Analytics

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: GDS 370, VGD 255

Today, game companies depend heavily on game testers to evaluate their game's playability before and after deployment, as part of the quality control process. In game testing, the quality of the software, the handling of assets, and the game play are scrutinized for defects (bugs). In this course, students will develop game testing skills through a series of game play exercises which will require detection of bugs, of defects and of game play compromises. Students will document the found errors in typical game tester report formats common to the industry. Additionally, this course will explore how game analytics are used to adjust and modify games based on the tracking of player interaction with the game.

VGD 404 Advanced Texturing

2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
Prerequisite: VGD 371

Expanding on previously learned techniques for texture creation, students will create high-quality textures through a series of projects that increase in complexity. Projects include creating textures from source images, creating textures from a blank canvas, and the creation of multipass shaders. The emphasis in this course will be on textures for game environments and assets.

VGD 408 Virtual Production/Motion Capture

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: VGD 390, VGD 392

Students will be immersed into the non-linear editing paradigm of virtual production. Using motion capture, designers will acquire, aggregate and refine data from actors to create, edit and play back complex character animations. The motion files created will be transferred to virtual characters for use in the virtual worlds within film, games and television.

VGD 412 Game Industry Perspectives

2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: GDS 370

The game industry is a big money business and spans the spectrum between the singular hobbyist to the massive-multinational corporation. This spectrum can make it challenging for a VGDD students to visualize the entry footholds on such a broad career path. Students in this course will explore the obstacles and best practices that define a game developer from independent project studio to "Triple A" mainstream company. Students will be introduced to the functional, legal and financial aspects of a creative company at its various scales of operation. Students will model themselves as specialists and apply their skills to a variety of weekly experiments that build toward a final project.

VETERINARY PRACTICE MANAGEMENT

VPM 111 Health Care Communications Skills

4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 101

This course is designed to introduce students to the principles of effective communication in the healthcare professions. Class meetings involve considerable attention to group dynamics, teamwork, listening and response techniques, and communication patterns. Through role-playing/simulations, small group, and individual presentations, students will be given opportunities to practice critical competencies in therapeutic communications necessary to ensure quality care outcomes.

VPM 112 Anatomy and Physiology for Practice Managers

2 Class Hours 3 Lab Hours 3 Quarter Credit Hours

This course covers the study of the structure and function of the animal body. Topics will focus on terminologies and definitions for musculoskeletal and cardiovascular systems. Students will be introduced to the basic levels of organization in the animal body and general properties and distribution of body fluids.

VPM 115 Pharmacology for Practice Managers

2 Class Hours 2 Quarter Credit Hours

A study of drugs, medications and chemicals used to treat animal diseases including: names, modes of action, proper usage, overdoses, and toxicities. Also covered are methods of drug development, FDA approval, producer marketing, reading and filling prescriptions, and proper record keeping.

VPM 200 Small Animals and Society

4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 101 or EN 110

This course will explore the growing role of the pet in American society. Focus will be placed on the growth of the pet care industry, the changing nature of the veterinarian/client relationship, and the place of the animal in the family/household. Course content will include the history of pets in America, films depicting the role of the family pet, and articles/information on the economic impact of the pet industry.

VPM 203 Principles of Economics

4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 102

This course introduces the fundamental principles of microeconomics and macroeconomics, such as scarcity, supply and demand, growth, fiscal and monetary policies, and the public and the private sectors.

VPM 220 Veterinary Practice Management I

3 Class Hours 3 Quarter Credit Hours
Prerequisites: VET 110, VET 120, MGM 105

This course introduces students to economics in the veterinary practice with a particular focus on tangible taxes, inventory control, tracking, record keeping, service pricing, general (non-internet) marketing, and handling sales/pharmaceutical representatives. Students will learn the overall business issues specifically pertinent to the veterinary practice.

VPM 222 Veterinary Practice Management II

3 Class Hours 3 Quarter Credit Hours
Prerequisite: VPM 220

Veterinary Practice Management II addresses client and customer issues as well as health and safety issues that present themselves in a veterinary practice. Topics will include compliance with OSHA standards; contagion and isolations issues; animal nutrition specifically with an understanding of basic needs for young, adult, and senior animals; an understanding of online pharmaceutical options; and record keeping/chart management.

VPM 230 Customer Service in the Veterinary Practice

3 Class Hours 3 Quarter Credit Hours
Prerequisite: VPM 111

This course introduces students to client service and communication skills needed in the highly competitive veterinary practice. It emphasizes effective customer service techniques, proper phone etiquette, and utilizing critical thinking to resolve client issues. It prepares students to train staff members in customer service.

VPM 240 Human Resources and Personnel Management

3 Class Hours 3 Quarter Credit Hours

This course will introduce students to topics in the area of human resources and personnel. Students will become familiar with the concept of benefits packages and basic legal requirements associated with them. Students also will learn general personnel practices including dealing with difficult employees, complying with basic labor law, tips on hiring and termination,

performing personnel reviews and evaluations, setting wages, integrating employee intervention programs (EIPs), and understanding basic staffing needs.

VPM 245 Legal Issues in Veterinary Practice

4 Class Hours 4 Quarter Credit Hours

This course addresses the numerous and specific legal and ethical issues that are commonly faced by veterinary practices. Topics will include discussing financial options with clients, particularly in end-of-life decisions; liability issues such as rabies, etc. for employees; client/doctor relationship; informed consent; and appropriate advice given in phone conversations.

VPM 250 Practicum

12 Lab Hours 4 Quarter Credit Hours
Prerequisites: VET 110, VET 120, VPM 220, MGM 105, MGM 125

Students will work in the field in veterinary offices one day per week gaining experience in human resources, labor relations, management, accounting, and customer service. Students will be expected to produce a journal outlining their experience.

VPM 251 Ethics and Humane Principles in the Veterinary Practice

4 Class Hours 4 Quarter Credit Hours
Prerequisites: VPM 220, VPM 222

This course will focus on the ethical, humane, and emotional aspects of the veterinary practice. Subjects will include ethical challenges in the veterinary field, as well as euthanasia, abuse and neglect cases, hoarding, and grief/emotional issues.

VPM 253 Internet Marketing and Branding

2 Class Hours 3 Lab Hours 3 Quarter Credit Hours
Prerequisite: EN 102

Internet marketing, and in particular social media marketing, relies heavily on favorable customer engagement with a recognized, respected brand. The opportunities for social media to help build close relationships between customers and preferred brands has created tremendous opportunity for small to medium-sized businesses (or veterinary practices) to promote their services via various online marketing applications. This course will explore the methods for concepting and building a successful brand, influencing targeted audience, and deploying Internet apps to achieve defined marketing goals.

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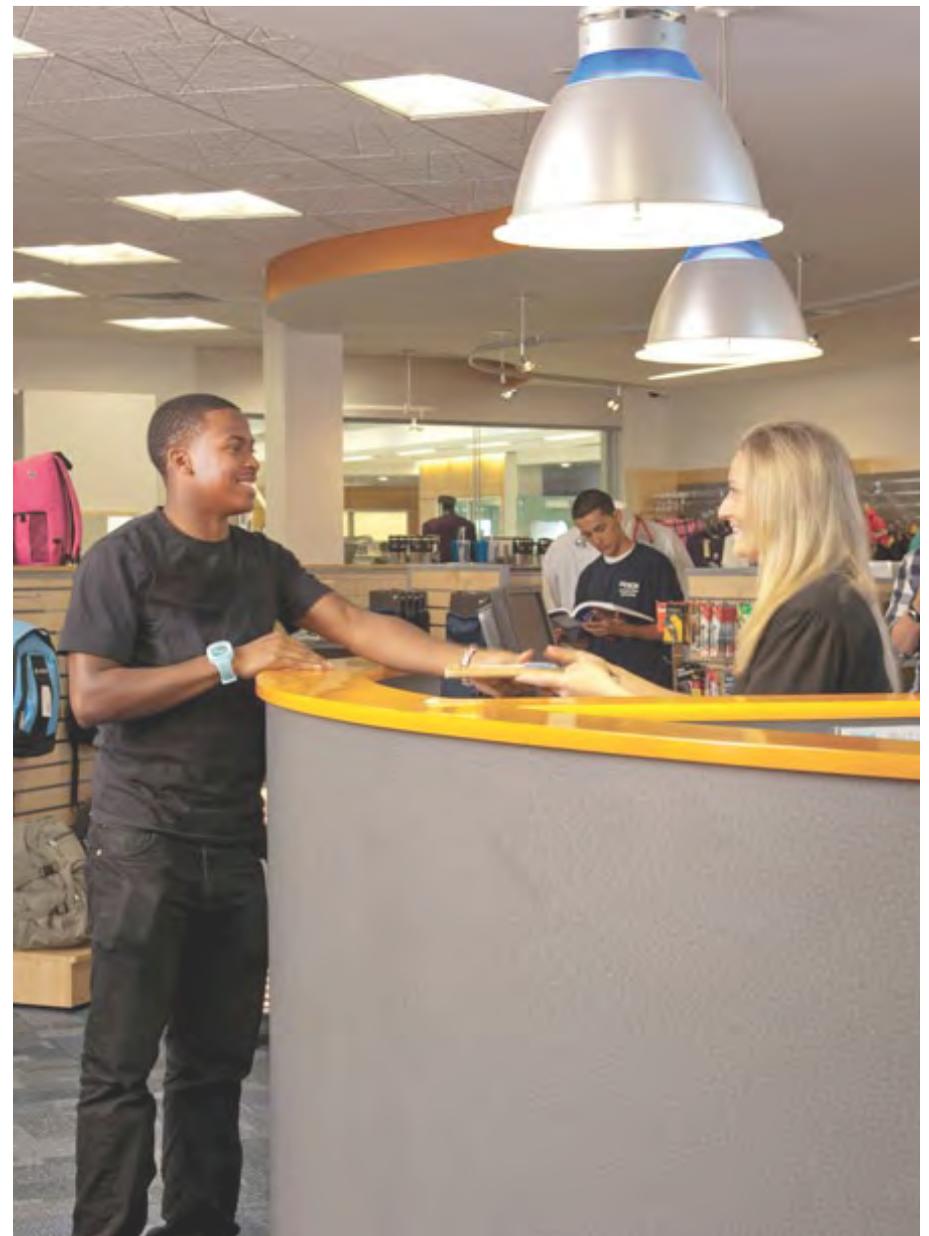
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M.P.A., Northeastern University
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Northeast Broadcasting School
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M.S., Elmira College

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Costin's Warwick Academy of Beauty Culture Inc.

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Trident Technical College

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Ph.D., University of Rhode Island

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University of Rhode Island

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Admissions Officer

Kassandra Tate
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LEED AP

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Michael Hayes, Associate Chair

Automotive Technology/Automotive Collision Repair Technology/Marine Technology
Paul Harden, Director of Transportation
Technologies
Virgilio Tavares, Assistant Chair

Biological Sciences
Paula T. Cantwell, Chair

Building Construction Technology
Felix Carlone, Chair

Business Management
Karen S. Whelan-Berry, Ph.D.,Chair

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Jo-Ann Z. Fielding, Chair

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Raymond J. Angell III, Esq., Chair

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Thomas Strolla, Chair

Electrical Technology/Electrical Technology With Renewable Energy Systems
Michael Petit, Chair

Electronic Systems Engineering Technology/ Electrical Engineering Technology/Mechanical Engineering Technology
Dean A. Plowman, Chair

Graphics, Multimedia and Web Design
Warrick Mitchell, Chair

Humanities and Social Sciences
David Cranmer, Ph.D., Co-Chair
Suzanne Gemma, J.D., Co-Chair

Information Technology/Game Development and Simulation Programming Technology/Video Game Design
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Joseph Ranone, Associate Chair
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Surgical Technology
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Ph.D., Brown University

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M.B.A., Suffolk University

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Clinton J. Shurtleff
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B.S., Rhode Island College

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B.A., Rhode Island College

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B.S., Purdue University

The Office of Teaching and Learning has available the official college directory of adjunct faculty, updated quarterly.
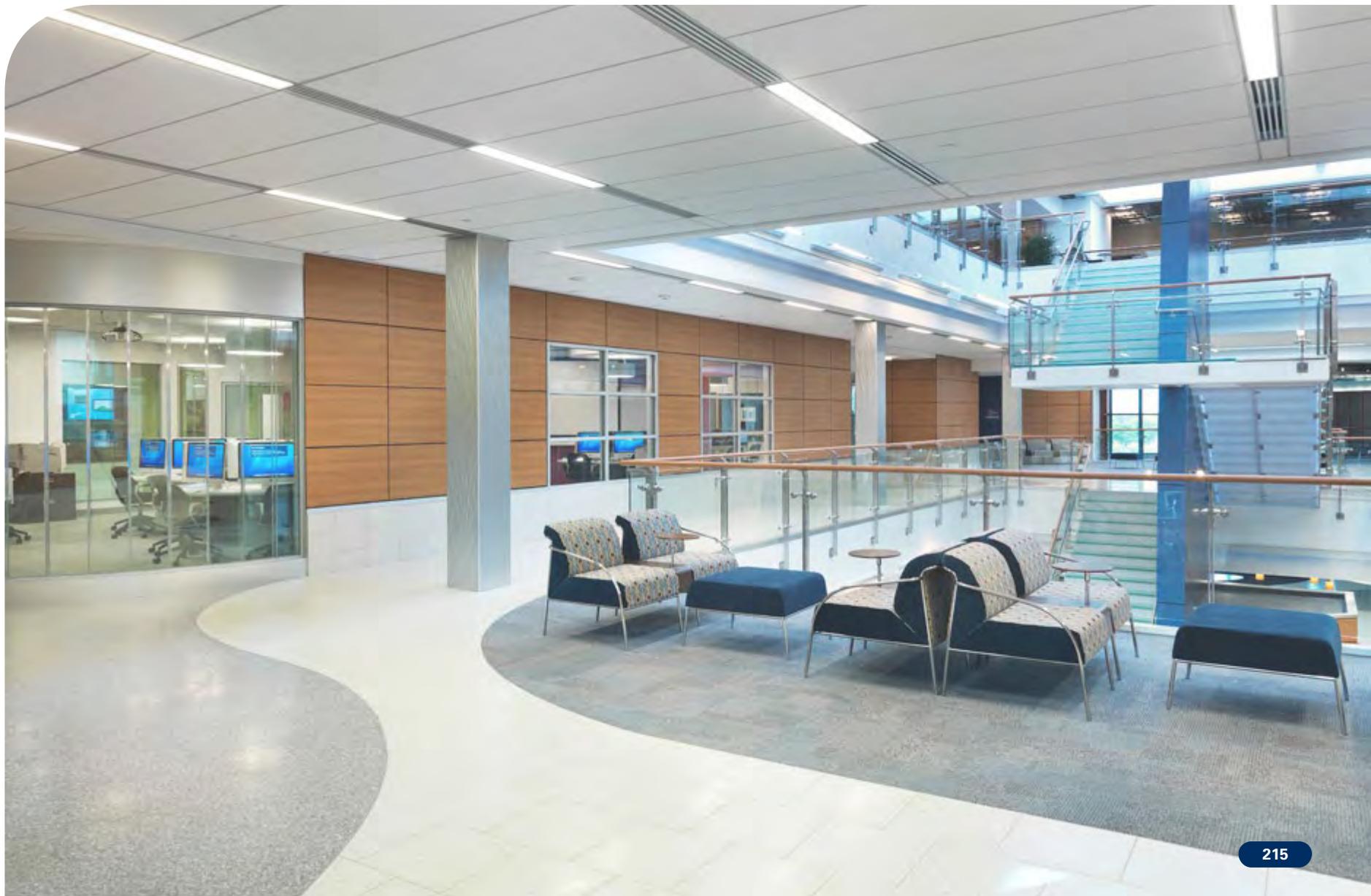
College Calendar

New students will be notified by mail of the exact date, time and location of new student registration. Registration dates listed here are tentative.

Winter Quarter, 2015

Classes Begin	January 5, 2015
Martin Luther King Day Holiday	January 19, 2015
February Vacation	February 15 thru 22, 2015
Classes End	March 21, 2015

Spring Quarter, 2015

Classes Begin	March 30, 2015
Memorial Day Holiday	May 25, 2015
Classes End	June 6, 2015

Summer Intersession, 2015

Classes Begin	June 8, 2015
Independence Day Holiday	July 3, 2015
Classes End	July 11, 2015

Summer Quarter, 2015

Classes Begin	July 22, 2015
Labor Day Holiday	September 7, 2015
Classes End	September 26, 2015

Fall Quarter, 2015

Classes Begin	October 5, 2015
Columbus Day Holiday	October 12, 2015
Veteran's Day Holiday	November 11, 2015
Thanksgiving Vacation	November 22 thru 29, 2015
Classes End	December 19, 2015

Winter Quarter, 2016

Classes Begin	January 4, 2016
Martin Luther King Day Holiday	January 18, 2016
February Vacation	February 21 thru 28, 2016
Classes End	March 19, 2016

Spring Quarter, 2016

Classes Begin	March 28, 2016
Memorial Day Holiday	May 30, 2016
Classes End	June 4, 2016

Summer Intersession, 2016

Classes Begin	June 6, 2016
Independence Day Holiday	July 4, 2016
Classes End	July 9, 2016

Summer Quarter, 2016

Classes Begin	July 18, 2016
Labor Day Holiday	September 5, 2016
Classes End	September 24, 2016

Fall Quarter, 2016

Classes Begin	October 3, 2016
Columbus Day Holiday	October 10, 2016
Veteran's Day Holiday	November 11, 2016
Thanksgiving Vacation	November 20 thru 27, 2016
Classes End	December 17, 2016

Winter Quarter, 2017

Classes Begin	January 3, 2017
Martin Luther King Day Holiday	January 16, 2017
February Vacation	February 19 thru 26, 2017
Classes End	March 18, 2017

Spring Quarter, 2017

Classes Begin	March 27, 2017
Memorial Day Holiday	May 29, 2017
Classes End	June 3, 2017

Summer Intersession, 2017

Classes Begin	June 5, 2017
Independence Day Holiday	July 4, 2017
Classes End	July 8, 2017

Summer Quarter, 2017

Classes Begin	July 17, 2017
Labor Day Holiday	September 4, 2017
Classes End	September 23, 2017

Fall Quarter, 2017

Classes Begin	October 2, 2017
Columbus Day Holiday	October 9, 2017
Veteran's Day Holiday	November 10, 2017
Thanksgiving Vacation	November 19 thru 26, 2017
Classes End	December 16, 2017

Winter Quarter, 2018

Classes Begin	January 2, 2018
Martin Luther King Day Holiday	January 15, 2018
February Vacation	February 18 thru 25, 2018
Classes End	March 17, 2018

Spring Quarter, 2018

Classes Begin	March 26, 2018
Memorial Day Holiday	May 28, 2018
Classes End	June 2, 2018

Summer Intersession, 2018

Classes Begin	June 4, 2018
Independence Day Holiday	July 4, 2018
Classes End	July 7, 2018

Summer Quarter, 2018

Classes Begin	July 23, 2018
Labor Day Holiday	September 3, 2018
Classes End	September 29, 2018

Fall Quarter, 2018

Columbus Day Holiday	October 8, 2018
Classes Begin	October 9, 2018
Veteran's Day Holiday	November 12, 2018
Thanksgiving Vacation	November 18 thru 25, 2018
Classes End	December 22, 2018

PARTIAL LIST OF EMPLOYERS

AAA of South Central New England
ABC 6
Abel Womack
AC Technologies
Aerovox
AH Harris & Sons
Air & Energy Systems
Alden Yachts
Alex & Ani
Amica Mutual Insurance
Amgen
Analysis & Technology
Andera
Artificial Kidney Centers
Astro-Med
Atlantis Comfort Systems
Atrion
Autocenter Enterprises
Autozone
AVIS
Ayoub Engineering
Bald Hill Dodge
Balise
Bank of America
BankRI
Barker Steel
Barry Automotive Group
Bayside OB-GYN
Bertrand Refrigeration
Blackstone Valley SurgiCenter
Blount
Blue Cross & Blue Shield of RI
Bluestreak.com
BMW of North America
BOCH Enterprises
BOSE Corp.
Brennan Oil
Bridge Technical Talent
Brigham & Women's Hospital
Brown University
Butler Hospital
CAM HVAC & Construction
Cardi's Furniture
Care New England
Carousel Industries
Cedar Crest Nursing Center
Century Drywall
CertainTeed Corporation
Charlton Memorial Hospital
Chase Manhattan Bank
Citadel Communications
Citizens Bank

Clair Motors
Clear Channel
Climate Air
Coldmasters Temperature Control
Collette Tours
Composite Technical Alloys
Computer Sciences Corp.
Conservation Services Group
Continental Field Service
Cox Communications
Cramer Productions
Cranston Police Department
Creative Environment
Crown Lift Trucks
Cryptic Studios
Cumberland Farms
CVS Health
CW 28
Datel
Davis Manufacturing
Day Kimball Hospital
DeBlois Oil
Delta Dental of RI
Diebold
DiLeonardo International
Disney World
Douglas Lumber
Dovetail Woodworking
Dunkin Donuts Center
Eagle Electric Supply
East Coast Plumbing
Eastern Butcher Block
Eastern Propane Gas
East Greenwich Yacht Club
Electric Boat
Elizabeth Webbing
Elmhurst Engineering
EMC Corporation
EMCOR Services New England
Emond Plumbing & Heating
ESPN
Ethan Allen Interiors
EVAS
Extraction Systems
Fastenal
Federal Aviation Administration
Fenwal Electronics
Ferland Corp.
Ferland Woodworking
Fidelity Investments
Firestone/Bridgestone
FM Global

Fox Toyota
Foxwoods Resort Casino
Fuller Memorial Hospital
Geico
GEMCO Electric
GEM Plumbing & Heating
Gencon Builders
General Dynamics/Electric Boat
General Kitchens
General Motors
General Physics
Gilbane
GKT Refrigeration
GTE
GTECH
Guill Tool & Engineering
Hanna Instruments
Hasbro
Herb Chambers Cadillac
Herrick & White
Hinkley Yacht Services
Hope Global
Hope Oil
IBM
ICON International
Inskip Automall
Integrated Systems
Integrated Technologies
Intel
Interstate Electrical Services
ITT Financial Services
Jake Kaplan's Ltd.
Janco
J.H. Lynch and Sons
Johnson & Johnson
Josten's Inc.
Judd Brown Designs
Kaman Industrial Technologies
Kent County Memorial Hospital
The Kent Center
Kettlebottom Productions
KPMG
Kraft Sports Group
KVH Industries
L3 Unidyne
LA Torrado Architects
Lawrence & Memorial Hospital
Leach & Garner
Lifespan
Lightolier
Lockheed Martin
Loral Aerospace

Lucent Technologies
Majestic Honda
Mass AV
Mass-RI Veterinary ER
Massachusetts Eye and Ear Infirmary
Massachusetts General Hospital
McLaughlin Research
Media One
MEDITECH
Memorial Hospital of Rhode Island
Mercedes Benz USA
MetLife
Midland Fire Protection
Millwork One
Miriam Hospital
Mohegan Sun
Motorola
MWV/Polytop
National Grid
National Lumber
National Refrigeration
National Security
NBC 10
NE Architectural Interiors
NetCenergy
New England Boatworks
New England Gas
New England Power Service
Newport Hospital
Northeast Marine
Northrop Grumman
O. Ahlborg & Sons
O.A. Pagnozzi & Sons
Ocean Spray
Ocean State Veterinary Hospital
Office Concepts
Oldcastle Building Envelope
Optigain
O'Rourke Electric
Otis Elevator
Paramex
Pawtucket Public School System
Pawtucket Red Sox
Pawtuxet Valley Medical & Surgical
Payne Elevator
Pearson Composites
PEP BOYS
Pepsi-Cola East
Perspective Communications
Point Judith Marina
Precision Tune AutoCare
Proctor & Gamble/Gillette

Providence Journal
Providence Washington Insurance Co.
Purvis Systems
RAU Fasteners
Raytheon
Reebok
RGA Interactive
Rhode Island Department of Corrections
Rhode Island Hospital
Rhode Island Renal Institute
Rhode Island State Police
RICOH
Rockwell Automation
Roger Williams Medical Center
Roger Williams Park Zoo
Roger Williams School of Law
Roto Rooter
Royal Electric
Ryan Iron Works
Saint Anne's Hospital
Saint Joseph's Health Services
Saint Luke's Hospital
Saint Vincent's Hospital
Schneider Electric
Sears Automotive Center
Seekonk Cable
Senergy
Sensata Technologies
Shawmut Design & Construction
Siemens
South County Hospital
South Shore Chrysler
Spot Interactive
Stearn Leach
Sturdy Memorial Hospital
Sullivan Tire
Superior Electric
Superior Refrigeration
Swarovski
Teknor Apex
Teradyne
TF Green Airport
The Big Picture Company
The Foxboro Company
Thermal Environmental
Thielsch Engineering
Tiffany & Company
Titleist and Foot-Joy Worldwide
Toray Plastics
Towerstream
TPI Marine Services
Traffic Engineering & Sales

Transportation Security Administration
Travel Centers of America
Triangle Refrigeration
Turbine
UNICOM
UNISYS
United Supply
United Surgical Center
United Woodworkers
Universal Studios
University Gastroenterology
UPS
U.S. Department of State
Vector Software
Verizon
Veteran's Administration Medical Center
Videology Imaging Solution
Vision 3 Architect
Vistawall
Viti Mercedes
Vitro Services
VNA of Rhode Island
Walco Electric
Walsh Engineering
Wardwell Braiding Company
Washington Trust
Wayne Distributing
Wayne J. Griffin Electric
WBRU
Westerly Hospital
WHDH
Wind River Systems
Women & Infants' Hospital
Wood River Health Service
Wood's Heating Service
Woodworkers Warehouse
WOON Radio
WPRI/WNAC
WPRO
WRIW
WSAR
WSBE
WWRX
XEROX
X-Ray Associates
Yale New Haven Hospital
Yomega Corporation
Yushin America
Zambarano Hospital
Zebra Technologies
Zymark Corporation

East Greenwich Campus
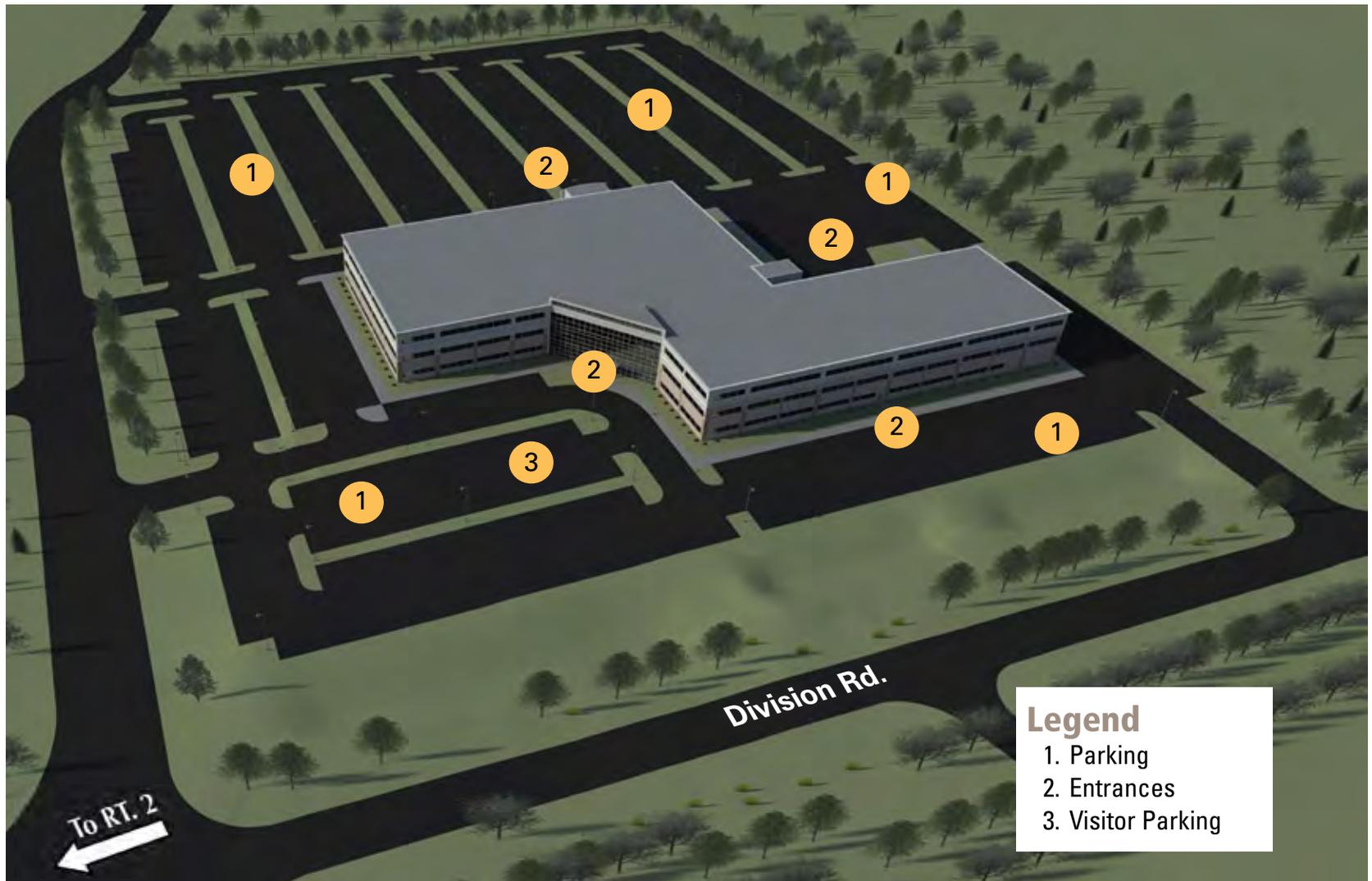
Directions to the East Greenwich Campus heading North on Route 95
- 95 North to Exit 8A
- Take exit 8A and merge onto Rt 2., Quaker Lane
- At the first traffic light, turn right onto Division Road.
  New England Tech is on the left.

Directions to the East Greenwich Campus heading South on Route 95
- 95 South to Exit 8 and bear right onto Rt. 2 south, Quaker Lane
- At the first traffic light, turn right onto Division Road.
  New England Tech is on the left.

Directions

Julian B. Gouse
Warwick Campus

2500 Post Road, Warwick, RI

From I-95 North or South
Take airport exit (Exit 13)
Follow signs for Post Road (U.S. Rt. 1)
Turn right onto Post Road south;
1 mile. Julian B. Gouse Campus is
on the left

Access Road Campus

100-110 Access Road, Warwick, RI

From Post Road North or South
Turn left opposite the airport parking garage
onto Coronado Road. At the first light,
turn right onto Jefferson Blvd.
At the next traffic light, turn left onto Service
Avenue. Take first left onto Plan Way, then
first right onto Access Road. The Access
Road Campus is on the left.
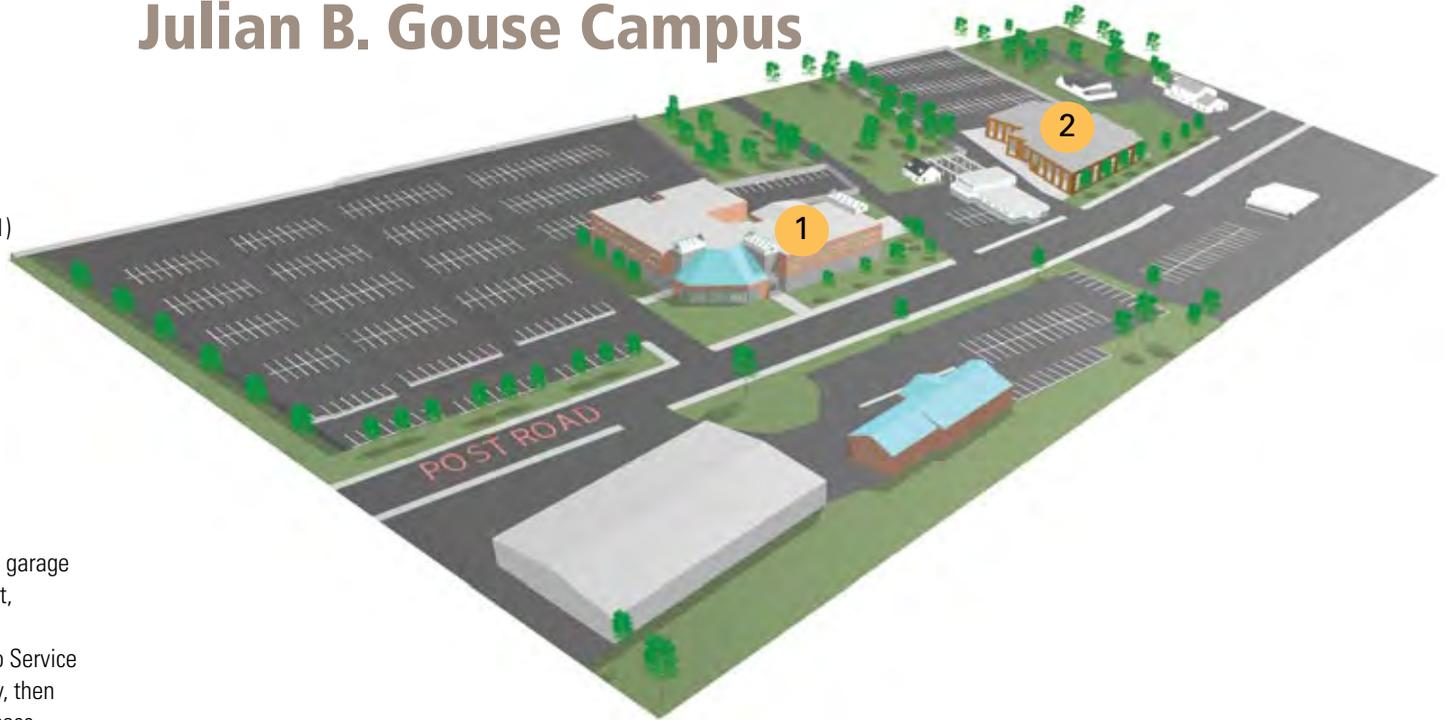
Legend

1. Center for Technologies
2. Gouse Building
3. Automotive Technology Building
4. Autobody Technology
5. Electrical Technology
   Marine Technology
6. Automotive High Performance La
7. Criminal Justice

Julian B. Gouse Campus

Access Road Campus

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