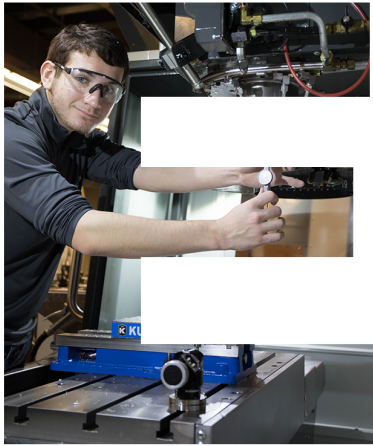




ESSEX NORTH SHORE

AGRICULTURAL & TECHNICAL SCHOOL



Program of Studies
2020-2021



ESSEX NORTH SHORE

AGRICULTURAL & TECHNICAL SCHOOL

Administration

| | |
|---------------------|---|
| Dr. Heidi T. Riccio | Superintendent-Director |
| Shannon Donnelly | Principal |
| Dr. Thomas O'Toole | Assistant Superintendent |
| Lisa Berube | Cooperative Education Coordinator |
| Bonnie Carr | Director of Workforce Development & Adult Education |
| Donald Ducharme | Director of CTE, East Academy |
| Sandra Goldstein | Director of School Counseling |
| Kathleen Holman | Director of Human Resources |
| Joseph V. Marino | Director of Technology |
| Janet Norris | Assistant Principal, East |
| Jill Sawyer | Director of CTE, West Academy |
| Jennifer Skane | Supervisor of Admissions & Freshman Academy |
| Joel Spruance | Assistant Principal, West |
| Joseph St. Pierre | Director of Facilities, Farm, & Grounds |
| Susan Stevens | Director of Special Education |
| Marie Znamierowski | Director of Business Operations |

School Committee

Name

Community

| | |
|---|-------------------------------|
| Mark B. Strout, <i>Chairperson</i> | Town of Marblehead |
| Wayne P. Marquis, <i>Vice Chairperson</i> | Town of Danvers |
| Beverly Ann Griffin-Dunne, <i>Secretary</i> | City of Peabody |
| Unfilled | Department of Agriculture |
| Francis A. DiLuna | Department of Agriculture |
| James P. O'Brien | Department of Agriculture |
| Unfilled | City of Beverly |
| Unfilled | Town of Boxford |
| Christopher Grant | Town of Essex |
| Valerie H. Gilman | City of Gloucester |
| William C. Lannon, III | Town of Hamilton |
| Gary F. Hathaway | Town of Lynnfield |
| Jeffrey Delaney | Town of Manchester-by-the-Sea |
| Alexandra Liteplo | Town of Middleton |
| Roxanne Schena | Town of Nahant |
| Bruce Perkins | Town of Rockport |
| Dr. James Picone | City of Salem |
| Alice McDonald | Town of Swampscott |
| David Symmes | Town of Topsfield |
| John Bucco | Town of Wenham |

Table of Contents

| | |
|---|----|
| MISSION STATEMENT | 1 |
| SCHOOL PROFILE | 2 |
| NEASC ACCREDITATION | 2 |
| MA DEPARTMENT OF ELEMENTARY AND SECONDARY EDUCATION ACCOUNTABILITY | 2 |
| PROMOTION & GRADUATION REQUIREMENTS | 3 |
| MCAS COMPETENCY DETERMINATION REQUIREMENTS | 4 |
| EDUCATIONAL PROFICIENCY PLANS (EPPS) | 4 |
| GRADING SYSTEM | 5 |
| ACADEMIC INTEGRITY | 5 |
| DISTRICT CURRICULUM ACCOMMODATION PLAN (DCAP) | 5 |
| GRADE POINT AVERAGE DETERMINATION | 5 |
| PLACEMENT OF GRADE 9 STUDENTS IN CAREER & TECHNICAL EDUCATION PROGRAMS | 7 |
| PLACEMENT OF STUDENTS IN ACADEMIC PROGRAMS | 8 |
| COURSE STRUCTURE & IDENTIFICATION | 9 |
| COOPERATIVE EDUCATION PROGRAM | 10 |
| SPECIAL EDUCATION | 10 |
| SECTION 504 | 11 |
| TITLE I SERVICES | 11 |
| CTE AND LANGUAGE COURSES | 11 |
| EARLY COLLEGE | 12 |
| ENGLISH LEARNERS | 12 |
| CAREER TECHNICAL & AGRICULTURAL PROGRAMS | 13 |
| ANIMAL SCIENCES | 14 |
| Companion Animals | 14 |
| Equine Science | 15 |
| Veterinary Science | 16 |
| PLANT SCIENCES | 17 |
| Arboriculture | 17 |
| Natural & Environmental Science | 18 |
| Natural Resource Management | 18 |
| Sustainable Horticulture | 19 |
| TECHNOLOGY & SERVICES | 20 |
| Advanced Manufacturing | 20 |
| Automotive Collision Repair and Refinishing | 21 |
| Automotive Technology | 21 |
| Culinary Arts & Hospitality | 22 |

| | |
|--|----|
| Design and Media Communications | 22 |
| Engineering & Automation Technology | 23 |
| Information Technology Services | 23 |
| LIFE & NATURAL SCIENCES | 24 |
| Biotechnology | 24 |
| Cosmetology | 25 |
| Dental Assisting | 25 |
| Environmental Technology | 26 |
| Health Assisting | 26 |
| CONSTRUCTION TECHNOLOGY | 27 |
| Carpentry | 27 |
| Construction Craft Laborers | 28 |
| Electricity | 28 |
| Heating, Ventilation, Air Conditioning & Refrigeration | 29 |
| Landscaping & Turf Management | 29 |
| Masonry & Tile Setting | 30 |
| Plumbing | 30 |
| OTHER CTE COURSES | 31 |
| ACADEMIC | |
| COURSE OFFERINGS | 32 |
| ENGLISH CORE COURSES | 33 |
| HISTORY CORE COURSES | 34 |
| MATHEMATICS CORE COURSES | 35 |
| SCIENCE CORE COURSES | 38 |
| SPANISH CORE COURSES | 40 |
| ACADEMIC ELECTIVE COURSES | 41 |
| UNDERSTANDING HIGHER EDUCATION | 41 |
| HISTORY & SOCIAL SCIENCES ELECTIVES | 41 |
| MATHEMATICS ELECTIVES | 42 |
| SCIENCE ELECTIVES | 43 |
| SPANISH ELECTIVES | 44 |
| ADDITIONAL COURSES | 45 |
| WELLNESS COURSES | 46 |
| STUDENT SUPPORT SERVICES | 48 |
| SCHOOL COUNSELING SERVICES | 48 |
| HEALTH SERVICES | 48 |
| EDUCATIONAL STABILITY | 49 |
| STUDENT ACTIVITIES | 50 |
| ATHLETICS | 54 |
| APPENDIX | 55 |
| Post-Secondary Planning | 55 |

MISSION STATEMENT

The mission of Essex North Shore Agricultural & Technical School is to create a culture of *academic and technical excellence*, encourage *continuous intellectual growth*, and promote *professionalism, determination, and citizenship* for all students, as they develop into *architects, artisans, and authors* of the 21st century community.

This will be accomplished through a four-tiered approach, requiring both commitment and investment from all members of our community:

Students will ...

- take ownership for their learning by being active participants in their own education
- be respectful and considerate citizens both in school and in the community
- encourage and support growth in themselves and others

Staff will ...

- equip students with the skills necessary to have an array of college and/or career choices upon graduation
- model improvement of skills while implementing a rigorous, relevant, and rich curriculum
- encourage and support each other in order to create an environment where everyone feels safe to grow and take intellectual risks

Caregivers will ...

- provide the at-home support necessary to be partners in education
- maintain clear and high expectations for student performance, in all areas, to foster the continual growth of each student
- guide their student towards continuous improvement

General Advisory will ...

- review and evaluate curriculum and instruction in order to advise on course materials
- support career and technical education with the current industry trends
- make administrators and instructors aware of potential internships and co-op opportunities for students

SCHOOL PROFILE

Essex North Shore Agricultural & Technical School opened as a four-year Massachusetts public career technical and agricultural high school in September 2014 following the merger of North Shore Technical High School, Essex Agricultural & Technical High School, and the Automotive Collision Repair and Refinishing, Automotive Technology, and Carpentry career and technical education programs from Peabody Veterans Memorial High School. Students from 17 member districts are enrolled in one of the school's 25 career technical, animal science, agricultural or natural resources programs while students from across the Commonwealth of Massachusetts are eligible to earn admissions to one of the district's seven* specialized animal science, agricultural, or plant science programs (see Appendix A). For more information see our Admissions Policy at EssexNorthShore.org/Admissions.

Upon successful completion of curriculum aligned to the [Massachusetts Curriculum Frameworks](#) and [Massachusetts Career Vocational Technical Education Frameworks](#), Essex North Shore Agricultural & Technical School graduates are awarded both a Massachusetts high school diploma and a certificate of completion from their career technical program.

College Board/ACT School Code: **220-980**

NEASC ACCREDITATION

Essex North Shore Agricultural & Technical School's NEASC accreditation determination was awarded Fall 2018 following a Spring 2018 review by the [The New England Association of Schools and Colleges](#).

MA DEPARTMENT OF ELEMENTARY AND SECONDARY EDUCATION ACCOUNTABILITY

Essex North Shore Agricultural & Technical School made gains from 2018 to 2019 in the state accountability system, but remains in the Partially Meeting Targets designation, according to the Massachusetts Department of Elementary and Secondary Education (DESE). These targets are based on MCAS English Language Arts, Mathematics, and Biology achievement, MCAS English Language Arts and Mathematics growth, high school completion, student attendance, and advanced coursework completion. For more information, select the following link: <http://profiles.doe.mass.edu/accountability/>.

PROMOTION & GRADUATION REQUIREMENTS

Each program at Essex North Shore Agricultural & Technical School is comprised of academic instruction and career and technical instruction aligned to the [Massachusetts Curriculum Frameworks](#) and the [Massachusetts Career Vocational Technical Education Frameworks](#) and the [Massachusetts High School Program of Studies \(MassCore\)](#).

Successful completion of the following courses and achievement of a competency determination based on MCAS state assessments or the equivalent in English Language Arts, Mathematics and Science (see below) are requirements for receiving an Essex North Shore Agricultural & Technical School diploma and a career technical program certificate.

| Grade 9 | Grade 10 |
|---|--|
| English Mathematics Science History and Social Sciences Spanish I* Health/Physical Education CTE Exploratory Program *Exceptions may apply | English Mathematics Science History and Social Sciences Elective Health/Physical Education Career Enhancement CTE Theory (where applicable) CTE Program |
| Grade 11 | Grade 12 |
| English Mathematics Science History and Social Sciences Elective Health/Physical Education Career Enhancement CTE Theory (where applicable) CTE Program | English Mathematics Electives (2)* Health/Physical Education Career Enhancement CTE Theory (based on CTE Program) CTE Program <i>*Note: A 4th year of lab-based science is recommended for all students pursuing public or private post-secondary enrollment.</i> |

Students must pass ALL courses, including OSHA 10 or the equivalent, and their Career Technical Program course requirements, EVERY year to be eligible for annual promotion and/or graduation. The completion of a Showcase Portfolio is also a graduation requirement. All students are required to maintain a working portfolio beginning at the end of freshman year. During senior year, a Showcase Portfolio will be prepared and presented to a committee for evaluation before graduation.

Students who earn a failing grade in one or two academic courses and/or their CTE theory course or the equivalent must complete an online course approved by the district or a summer school course in the student's community the summer immediately following failure to adequately earn credit for promotion/graduation.

Students who fail their CTE program and/or fail three or more academic courses, including but not limited to CTE theory must request permission in writing from the Principal within five (5) school days following completion of the school year to either:

1. Repeat the grade at Essex North Shore Agricultural & Technical School. If a student is repeating a grade, they may not take the place of another qualified candidate in a CTE program, or
2. Be granted a waiver to enroll in online courses to make up the failed academic or related courses and be considered for promotion to the next grade.

MCAS COMPETENCY DETERMINATION REQUIREMENTS

The Massachusetts Education Reform Law of 1993, state law, G.L. c. 69, § 1D, requires that all students who are seeking to earn a high school diploma, must meet the Competency Determination (CD) standard, in addition to meeting all local graduation requirements. Students must earn the equivalent of a scaled score of at least 240 on the grade 10 MCAS English Language Arts (ELA) and Mathematics tests, or earn a scaled score between 220 and 238 on these tests and fulfill the requirements of an Educational Proficiency Plan (EPP). Students must also earn a scaled score of at least 220 on the high school MCAS Biology test. For more information on MCAS graduation requirements visit the following DESE website: <http://www.doe.mass.edu/mcas/graduation.html>.

EDUCATIONAL PROFICIENCY PLANS (EPPS)

An EPP is a plan that schools develop to help individual students make progress towards proficiency in ELA and/or Mathematics. The purpose of an EPP is to help a student acquire the knowledge and develop the skills he or she needs to be ready for higher education and/or a career after high school.

Each EPP must include:

- A review of the student's strengths and weaknesses based on MCAS tests and other assessment results, coursework, grades, and teacher input.
- A list of courses in the relevant ELA and/or Mathematics content areas that the student must take and complete successfully in grades 11 and 12.
- A description of assessments the school will use at least once each year to make sure that the student is making progress toward or has achieved proficiency.

For more information on EPP requirements visit the following DESE website:

<http://www.doe.mass.edu/ccr/epp/general/default.html>

GRADING SYSTEM

Letter grades will be given with the following numerical equivalent:

| | | | | |
|-----------|----------|----------|----------|--------|
| A+ 100-97 | B+ 89-87 | C+ 79-77 | D+ 69-67 | F 59-0 |
| A 96-93 | B 86-83 | C 76-73 | D 66-63 | |
| A- 92-90 | B- 82-80 | C- 72-70 | D- 62-60 | |

ACADEMIC INTEGRITY

It is the expectation of the administration and faculty at Essex North Shore Agricultural & Technical School that all students will work to the best of their ability. We are committed to helping all students become successful learners. Therefore, it is the students' responsibility to submit work that is their own. If students do not submit their own work, teachers are unable to determine the needs of the student. Violations of the academic integrity policy, including cheating and plagiarism, will be documented in Aspen and parents will be notified.

DISTRICT CURRICULUM ACCOMMODATION PLAN (DCAP)

Essex North Shore Agricultural & Technical School is an inclusive school where diversities of all types, including learning differences, are respected and embraced. We recognize that all students have individual learning needs. Our classroom instruction is designed to provide all learners with access to our curricula. Our [District Curriculum Accommodation Plan \(DCAP\)](#) describes accommodations that are available for all students.

GRADE POINT AVERAGE DETERMINATION

Many courses carry a weighted Grade Point Average (GPA). The higher the level of a course, the higher the GPA weight. Thus, AP and Early College (EC) level courses carry a 5.0 value for earning an A in a designated course, Honors level may carry a 4.67 value for an A. ACP courses carry a 4.33 value, and College Prep courses carry a 4.0 value.

Grade Point Averages will be calculated based on a weighted 4.0 scale no less than once annually at the conclusion of the school year. Courses are be weighted accordingly:

Course Weighting for Grade Point Average (GPA):

| Letter Grade | Numerical Grade | College CP | College ACP | Honors | AP/EC |
|---------------------|------------------------|-------------------|--------------------|---------------|--------------|
| A+ | 97-100 | 4.3 | 4.7 | 5.0 | 5.3 |
| A | 93-96 | 4.0 | 4.33 | 4.67 | 5.0 |
| A- | 90-92 | 3.7 | 4.01 | 4.32 | 4.63 |
| B+ | 87-89 | 3.3 | 3.58 | 3.86 | 4.13 |
| B | 83-86 | 3.0 | 3.25 | 3.5 | 3.75 |
| B- | 80-82 | 2.7 | 2.93 | 3.16 | 3.38 |
| C+ | 77-79 | 2.3 | 2.49 | 2.68 | 2.88 |
| C | 73-76 | 2.0 | 2.17 | 2.34 | 2.5 |
| C- | 70-72 | 1.7 | 1.84 | 1.98 | 2.13 |
| D+ | 67-69 | 1.3 | 1.41 | 1.52 | 1.63 |
| D | 64-66 | 1.0 | 1.08 | 1.16 | 1.25 |
| D- | 60-63 | 0.7 | 0.76 | 0.82 | 0.88 |
| F | 59 or below | 0 | 0 | 0 | 0 |
| NC | No Credit | | | | |

PLACEMENT OF GRADE 9 STUDENTS IN CAREER & TECHNICAL EDUCATION PROGRAMS

Grade 9 CAREER DISCOVERY PROGRAM

During the Career Discovery Program, all freshmen students will be introduced to the 25 programs offered at Essex North Shore Agricultural & Technical School. This will occur during the first five (5) Career Technical Education Program days of the school year.

Grade 9 EXPLORATORY PROGRAM

Students will participate in eight (8) CTE program areas from September 19, 2018 to January 8, 2019 for a maximum of five (5) days per cycle. During the exploratory experience, career technical instructors evaluate each student based upon a common rubric/scoring guide including the following:

| | |
|-----|---|
| 40% | Weekly Assessment in Workmanship/Production, Safety, Career Awareness and Professionalism/Employability |
| 20% | Performance-Based Assessment |
| 20% | Written Assessment |
| 20% | Reflection/Journal Entry |

Grade 9 CAREER TECHNICAL PROGRAM SELECTION

Students will make their program selections by rank ordering the CTE programs for which they earned a passing grade during the Exploratory Program in order of placement preference. Each student will identify his/her technical program of choice, as well as their second through eighth choices from the explored technical programs. This process will be electronic and will take place during the last exploratory cycle.

Grade 9 CAREER TECHNICAL PROGRAM PLACEMENT

Students' program selection requests are sorted in rank order and are placed according to their score in the technical program the student requested as their first choice. In the event of a tie, tie scores are first broken by the cumulative average of all eight exploratory grades. If this initial tiebreaker results in another tie, students' academic and conduct reports will be considered to resolve the tiebreaker. In the event that a technical program exceeds its capacity for enrollment, every effort will be made to place a student in their next highest ranking choice based on availability and eligibility. Also, when students are placed in a program other than their first choice, yet would like to be in a different technical program that is at capacity, wait lists are created. Students on a waitlist are rank ordered by their exploratory grades. Wait listed students are notified when an opening occurs in their desired choice and given the option to change or remain in their current placement.

For more information see ENSATS Admissions Policy at www.EssexNorthShore.org/admissions

PLACEMENT OF STUDENTS IN ACADEMIC PROGRAMS

Freshman

Once incoming ninth grade students have been accepted to Essex North Shore Agricultural & Technical School, a placement exam will be administered in the spring. The purpose of this test is to ensure appropriate placement for each freshman in their academic courses. Course level recommendations are also requested from sending middle schools for incoming freshmen to further inform freshman scheduling.

Sophomores, Juniors, and Seniors

Level recommendations (College Prep, Accelerated College Prep, Honors, and Advanced Placement) for required Courses in English Language Arts, History and Social Sciences, Mathematics, and Science are made by the sending teacher based on the results of each student's work in their course as well as all prior courses in the same content area. In some cases, such as upper level science courses (Chemistry and Physics), students' prior performance in mathematics courses is also taken into consideration when making a level recommendation due to the mathematics skills needed for higher levels of these courses.

Students may choose an elective in the sophomore, junior, and senior years. There is a variety of electives offered in all content areas each year including Spanish in the sophomore, junior, and senior years. Additionally, a few electives target particular skills that some students may need. These electives will be a recommended option for those students. Please note that Spanish I for juniors will no longer be offered for the 2021-22 school year, and Spanish II for seniors will no longer be offered for the 2022-23 school year.

Course Selection Process

For leveled core courses, teacher recommendations will determine placement for students entering Grades 10-12. Please note the recommendations and prerequisites in the course descriptions under all leveled courses. If students or parents/guardians are in disagreement with the recommended placement, the parent/guardian must document this request in writing during the course selection period.

Schedule Changes

Schedule changes are disruptive to a student's education. Once the school year has begun, changes to class schedules are discouraged. Students and families are expected to select courses carefully during the course selection period in order for schedules and staffing to be completed. Please consult the recommendations for placement and pre-requisite course(s) in the course description.

Please follow the procedure in the *Student Handbook* to initiate schedule changes. The following are schedule change guidelines:

- There is a freeze on schedule changes for the first two academic cycles at the beginning of the specified term.
- Requests to change teachers will not be considered.
- Courses dropped after October 1 may result in the appearance of a Withdrawal "W" on the student's transcript. Changes approved in Quarter 1, but after progress reports are issued, may not be made until the start of Quarter 2. The same applies to new courses that commence Quarter 3.

- No changes will be made after four academic cycles into the term unless extenuating circumstances exist.

COURSE STRUCTURE & IDENTIFICATION

All courses offered at Essex North Shore Agricultural & Technical School are college preparatory so that all students are college and career ready. Courses are structured using the following delineations:

College Preparatory (CP)

College Preparatory is designed for college-bound and career-oriented students. The curriculum develops critical skills for college and career readiness and moves at a pace that focuses on content and skills essential to succeed after high school. Students will complete assignments independently and in small groups in a structured class environment and will have homework assignments and projects that extend concepts and skills practiced in class.

Accelerated College Preparatory (ACP)

Accelerated College Preparatory is designed for students preparing for two- and four-year colleges. The curriculum develops critical skills for college and career readiness and moves at a moderate pace. Students should evidence a solid interest in learning and work well independently and in groups with teacher direction. Students are capable and willing to put time and effort into their assignments. These courses require daily homework, longer term projects, and consistent participation in various class activities.

Honors (H)

This level is the most academically challenging of the three college preparatory levels, and it moves at a rigorous pace with nightly homework as well as independent projects. Students in honors courses should possess a strong interest in learning and have a high level of intellectual curiosity. Students are expected to be self-motivated and work well with others. Homework is required to be done on time to ensure participation in daily class discussions.

Advanced Placement (AP)

Advanced Placement courses require students to apply advanced critical thinking and analytical skills that are typical of comparable college-level courses. This guiding Advanced Placement enrollment policy holds true for all Advanced Placement courses and exams, regardless of the grade level in which a student takes Advanced Placement coursework. Advanced Placement courses are specifically designed to provide challenging, college-level coursework for willing and academically prepared high school students. The amount of homework, independent research and reading is significantly more than in other courses. Students are expected to take the Advanced Placement exam in the spring. Advanced Placement courses follow specific guidelines and requirements set forth by the College Board. Students taking Advanced Placement courses are required to sign and return this *Advanced Placement Student & Parent/Guardian Contract*. For more information visit the AP Central website: <http://apcentral.collegeboard.com/home>.

Early College Course (EC)

An Early College course will be collaboratively taught by a team of ENSATS instructor(s) and North Shore Community College faculty. Learning will take place on both the ENSATS and NSCC campuses throughout

the term of the course (transportation provided). Successful completion of an early college course will result in students earning both ENSATS high school credit and NSCC college credit.

COOPERATIVE EDUCATION PROGRAM

It is the expectation of Essex North Shore Agricultural & Technical School that all students participate in a Cooperative Education experience in their senior year. Students are able to go out on Coop as early as midway through their junior year as long as they meet the criteria below.

Students are encouraged to meet with their program instructor and the Cooperative Education Coordinator to discuss requirements and steps necessary to complete the process.

Cooperative Education Criteria:

- Minimum age of 16.
- Completion of 1½ years of full time study in the Vocational/Agricultural Program.
- No earlier than midway through junior year. (90 days)
- Career Plan, resume, letters of recommendation, competency listing updated and reviewed by the student's Vocational/Agricultural Instructor.
- OSHA 10 Credential (Construction, General Industry, or Health) and any other certification/credential specific to the student's Vocational/Agricultural program. (ie. CNA, Adobe, ServSafe, Radiology)
- Recommendation of Vocational/Agricultural Instructor: Student demonstrates the acquisition of the knowledge and skills in the vocational/agricultural program associated with 1½ years in the program.
- Vocational/Agricultural program coursework grade: minimum: "C" in the prior term and maintaining this standard at time of placement.
- Academic grade minimum: Passing all Core Academic classes in the prior term and maintaining this standard at the time of placement.
- Attendance: Demonstrate that they meet the Attendance Policy set forth in *The Student Handbook*.
- Discipline records will be reviewed by the Assistant Principal and CTE Director.
- Successful completion of all relevant placement paperwork.
- Coop students will need to provide their own transportation to the placement.
- Post-placement students will submit time cards and written entries weekly to the designated instructor.
- Students should notify the Coop Coordinator of any absence from work or injury that occurs at the workplace as soon as possible.
- After placement, students who do not meet coursework grade and/or attendance criteria will be placed on probation for two cycles as this gives the student the opportunity to return to good standing. Students would then remain on probation for the remainder of the term. Probation may consist of weekly progress reports, meetings, and other interventions to assist the student to remain on Coop.

For additional information, contact the ENSATS Cooperative Education Coordinator.

SPECIAL EDUCATION

Essex North Shore Agricultural & Technical School is an inclusive school where diversities of all types, including learning differences, are respected and embraced. We recognize that all students have individual learning needs. Our classroom instruction is designed to provide all learners with access to our curricula. Students' special education programs are individualized. Some examples of supports and services are classes

co-taught by general and special education teachers, or classes supported by special education paraprofessionals. Students may receive individual or small-group services, such as academic support, reading instruction or speech and language therapy. Decisions regarding the need for supports and services are made by the Individualized Education Program teams of eligible students. For additional information contact the ENSATS Director of Special Education.

SECTION 504

Section 504 is a part of the Americans With Disabilities Rehabilitation Act of 1973, a federal law designed to protect the rights of individuals with disabilities in programs and activities that receive federal financial assistance from the U.S. Department of Education. Section 504 provides: “No otherwise qualified individual with a disability in the United States . . . shall, solely by reason of her or his disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.”

To be protected under Section 504, a student must be determined to:

1. Have a physical or mental impairment that substantially limits one or more major life activities; or
2. Have a record of such an impairment; or
3. Be regarded as having such an impairment. Major life activities include caring for one’s self, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning, and working. This list is not exhaustive.
4. Essex North Shore Agricultural & Technical School recognizes its obligations under the law.

The District 504 Coordinator has the overall responsibility for overseeing efforts to ensure full compliance including the identification, evaluation, and the determination of whether or not a child is eligible to receive accommodations under Section 504 of the Rehabilitation Act of 1973. For additional information, contact the ENSATSD District Section 504 Coordinator.

TITLE I SERVICES

Title I is a federally-funded supplemental program (grant-funded) that provides additional reading and mathematics instruction and services to Essex North Shore Agricultural & Technical School students who have been identified through placement tests or teacher referrals. Reading instruction takes place during seminar blocks so students do not miss core academic class periods. For additional information, contact ENSATS Title 1 Director.

CTE AND LANGUAGE COURSES

In keeping with the [mission](#) of our school, *creating a culture of academic and technical excellence*, the Essex North Shore Agricultural & Technical School Program of Studies is transitioning our Spanish offerings over the next two years. As part of this process, we have studied [Mass CORE](#) requirements, reviewed other regional vocational-technical course offerings, and factored in the admission standards for the [Massachusetts State University System](#). This ongoing process has brought to light that our students require more credit hours related to their technical and agricultural areas; therefore, some course offerings have been realigned consistent with our mission.

MassCore stipulates that "Students enrolled in a state-approved Career and Technical Education program of studies have the option of opting out of Foreign Language and Art and still fulfill MassCore."

As ENSATS begins to align our course offerings to the *Massachusetts Career Vocational Technical Educational Frameworks*, we will offer a full year of Spanish I to students during freshman year. We will also offer for 2020-21 a limited number of Spanish I sections for students entering grade 10 as an elective. These courses will be intensive, hybrid semester offerings and will combine 45 blocks of direct classroom instruction with 45 online Spanish-learning modules.

For students entering grade 11 during the 2020-21 school year we will offer this same hybrid semester model of Spanish I for CP and ACP students. Please note that this will be the final year that we offer Spanish to juniors. For students entering grade 12, who have completed Spanish I during the 2019-20 school year, we will offer a hybrid semester course of Spanish II for CP and ACP students. This course will only be offered during the 2020-21 and 2021-22 school years and then will no longer be offered as we shift our language offerings to grades 9 and 10.

EARLY COLLEGE

An Early College course will be collaboratively taught by a team of ENSATS instructor(s) and North Shore Community College (NSCC) faculty. Learning will take place on both the ENSATS and NSCC campuses throughout the term of the course (transportation provided). Successful completion of an early college course will result in students earning both ENSATS high school credit and NSCC college credit.

ENGLISH LEARNERS

English Learners (ELs) are students whose first language is other than English and who are not yet sufficiently proficient in English in the four language domains of: Listening, Speaking, Reading, and Writing. Essex North Shore Agricultural & Technical School uses a two-pronged approach to support English Learners. Students who are identified as ELs receive English as a Second Language (ESL) instruction and Sheltered English Immersion (SEI) instruction to assist them in developing the language skills necessary to participate fully in academic and career technical education classes. Additionally, the progress of Former English Learners (FELs), who receive the benefit of instruction that is consistent with the principles of Sheltered English Immersion, is monitored for a period of four years subsequent to their being identified as no longer requiring direct ESL instruction. EL students' skills are evaluated each year using the ACCESS for ELs test, as required by state law.

Essex North Shore Agricultural & Technical School actively encourages the participation of current and former English Learners in courses at all levels and ensures that the student's level of English proficiency does not impede a student's participation in advanced level courses. Additionally, current and former English Learners have access to and are actively encouraged to participate in all of the many extracurricular opportunities that ENSATS provides.

For additional information, contact the ENSATSD District EL Coordinator.



ESSEX NORTH SHORE
AGRICULTURAL & TECHNICAL SCHOOL

CAREER TECHNICAL & AGRICULTURAL PROGRAMS

Essex North Shore Agricultural & Technical School admits students from our 17 member communities to our 25 career technical, animal science, and agricultural programs. Member communities include Beverly, Boxford, Danvers, Essex, Gloucester, Hamilton, Lynnfield, Manchester-by-the-Sea, Marblehead, Middleton, Nahant, Peabody, Rockport, Salem, Swampscott, Topsfield, and Wenham. Students from across the Commonwealth of Massachusetts are also eligible to apply for admission to Essex North Shore Agricultural & Technical School's animal science, agricultural, and natural resource programs (*See: [Specialized Agricultural and Natural Resources Programs Nonresident Student Enrollment Advisory, MA DESE](#)*).



Massachusetts Department of
ELEMENTARY & SECONDARY
EDUCATION

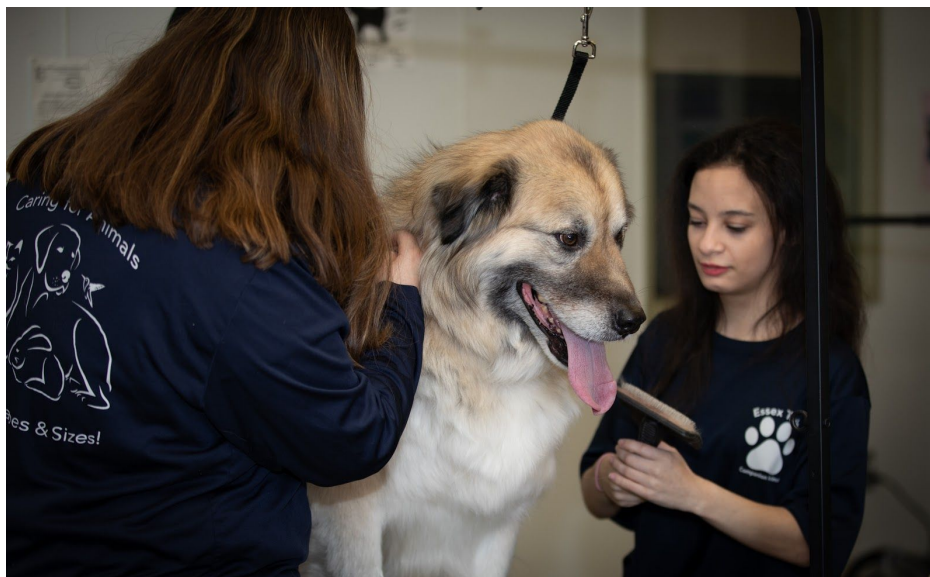


Learning that
works for America



NEW ENGLAND ASSOCIATION
OF SCHOOLS AND COLLEGES

ANIMAL SCIENCES



Companion Animals

The Companion Animal program is designed to give students hands-on and theory-based learning in the areas of animal health & nutrition, behavior & training, and animal grooming & husbandry. This program will teach students a variety of companion animal skills such as restraints, breed ID, proper breeding technique, breed handling styles, pet grooming, care, and maintenance while working with rodents, reptiles, dogs, cats, and fish. Students will develop skills pertaining to basic grooming, an understanding of training theories, and gain knowledge of basic animal nutrition requirements, and anatomy and physiology theory. Students will practice customer service skills and understand the role and responsibilities of an effective employee in the companion animal industry. Each student will have the opportunity to earn an OSHA 10 hour card, be certified to practice canine and feline CPR and first aid.

| Course Number | Name | Credit | Grade Level |
|---------------|---|--------|-------------|
| coa101 | Companion Animals Exploratory | 1.0 | Grade 9 |
| coa103 | Exploratory/ Companion Animals | 4.0 | Grade 9 |
| coa201 | Introduction to Grooming | 6.4 | Grade 10 |
| coa202 | Companion Animals Anatomy & Physiology 10 | 3.2 | Grade 10 |
| coa205 | Companion Animals Health and Nutrition | 6.4 | Grade 10 |
| coa301 | Grooming Maintenance and Management | 9.6 | Grade 11 |
| coa302 | Animal Breeding/ Training/ Showing I | 6.4 | Grade 11 |
| coa401 | Advanced Grooming | 9.6 | Grade 12 |
| coa403 | Animal Breeding/ Training/ Showing II | 6.4 | Grade 12 |
| ct401 | Career Technical Theory 12 | 4.0 | Grade 12 |

*Articulated Credit Agreement with Unity College

Equine Science

The Equine Science program allows each student to build a successful career path by providing hands-on experiences. Throughout the courses in this program students will explore many aspects of Equine Science including: Basic Equine Care, Training Techniques, Riding/Driving, Emergency Care, Barn Management Practices, Riding Instruction, Equine Health Care, Breeding and Genetics, Anatomy and Physiology, Nutrition and General Wellness, Laws and Regulations, and Practical Horsemanship.

| Course Number | Name | Credit | Grade Level |
|----------------------|--|---------------|--------------------|
| eq101 | Equine Science Exploratory | 1.0 | Grade 9 |
| eq103 | Exploratory/ Equine Science | 8.0 | Grade 9 |
| eq201 | Equine I | 8.0 | Grade 10 |
| eq204 | Equine Anatomy & Physiology | 2 | Grade 10 |
| eq202 | Equine Health and Nutrition | 2 | Grade 10 |
| eq203 | Equine Emergency Care | 4.0 | Grade 10 |
| eq301 | Equine Science Breeding and Genetics | 4.0 | Grade 11 |
| eq302 | Equine Science Health Management I | 4.0 | Grade 11 |
| eq303 | Equine Science Practical Horsemanship | 8.0 | Grade 11 |
| eq401 | Barn Management | 4.0 | Grade 12 |
| eq402 | Equine Methods of Riding, Training and Instruction | 10.0 | Grade 12 |
| eq403 | Equine Health Management II | 4.0 | Grade 12 |
| ct401 | Career Technical Theory 12 | 4.0 | Grade 12 |

Veterinary Science

The Veterinary Science program is designed to give students experience needed to work in the veterinary field. Throughout the course of this program, students will practice restraints and medical procedures on rodents, reptiles, dogs, cats, livestock animals, and horses. Students will also develop skills in laboratory work, including performing blood testing, urinalysis, and tests for internal and external parasites as well as gain the ability to administer medication. Students will practice customer service skills and understand the role and responsibilities of each member of the veterinary healthcare team. Students will earn an OSHA 10 hour card and be certified to practice canine and feline CPR and first aid.

| Course Number | Name | Credit | Grade Level |
|----------------------|-------------------------------------|---------------|--------------------|
| vs101 | Veterinary Science Exploratory | 1.0 | Grade 9 |
| vs103 | Exploratory/ Veterinary Science | 8.0 | Grade 9 |
| vs201 | Veterinary Sci Health and Nutrition | 4.8 | Grade 10 |
| vs202 | Fundamental Veterinary Science | 5.6 | Grade 10 |
| vs208 | Veterinary Anatomy and Physiology | 5.6 | Grade 10 |
| vs301 | Practical Physiology | 6.4 | Grade 11 |
| vs302 | Veterinary Lab Techniques | 4.8 | Grade 11 |
| vs303 | Practical Veterinary Science | 4.8 | Grade 11 |
| vs401 | Animal Nursing | 4.8 | Grade 12 |
| vs402 | Applied Veterinary Science | 6.4 | Grade 12 |
| vs403 | Advanced Lab Technology | 4.8 | Grade 12 |
| ct401 | Career Technical Theory 12 | 4.0 | Grade 12 |

*Articulated Credit Agreement with Unity College

PLANT SCIENCES



Arboriculture

Arboriculture is the cultivation, management, and study of individual trees, shrubs, vines, and other perennial woody plants. More than 80% of people in the United States live in areas filled with trees, and planting trees in all settings is increasing. As this trend continues, arborists and urban foresters strive to preserve trees in urban and suburban areas. In this program, students learn how arborists and urban foresters ensure healthy populations of trees to provide sustained benefits to people, including the removal and replacement of hazardous trees. Students are prepared for the following *certifications*: *Massachusetts Pesticide License, ISA-Certified Tree Climbing Professional, and ISA Aerial Lift Professional.*

| Course Number | Name | Credit | Grade Level |
|----------------------|----------------------------|---------------|--------------------|
| ar101 | Arboriculture Exploratory | 1.0 | Grade 9 |
| ar103 | Exploratory/ Arboriculture | 8.0 | Grade 9 |
| ar200 | Arboriculture 10 | 16.0 | Grade 10 |
| ar300 | Arboriculture 11 | 16.0 | Grade 11 |
| ar400 | Arboriculture 12 | 16.0 | Grade 12 |
| ct401 | Career Technical Theory 12 | 4.0 | Grade 12 |

Natural & Environmental Sciences

(Commencing with the Class 2023)

REVISED DESCRIPTION PENDING FOR NES:

PRIOR NR description: The Natural Resource Management program uses inquiry-based projects to develop student skills in observation, assessment, analysis, and management of our most vital resources; water, soil, forests, and wildlife. Our field-based program immerses students into the full range of New England environments, including mountains, forests, ponds, streams, and coastal shorelines. Our goal for each student is to equip them with the necessary skills, knowledge, and experience that will give them an edge in the expansive field of natural resources, environmental science, and civil engineering.

| Course Number | Name | Credit | Grade Level |
|---------------|---|--------|-------------|
| nes101 | Natural & Environmental Sciences Exploratory | 1.0 | Grade 9 |
| nes103 | Exploratory/ Natural & Environmental Sciences | 8.0 | Grade 9 |
| nes2TBD | PENDING | | Grade 10 |
| nes2TBD | PENDING | | Grade 10 |

Natural Resource Management

(concluding with the graduating Classes 2021 and 2022)

The Natural Resource Management program uses inquiry-based projects to develop student skills in observation, assessment, analysis, and management of our most vital resources; water, soil, forests, and wildlife. Our field-based program immerses students into the full range of New England environments, including mountains, forests, ponds, streams, and coastal shorelines. Our goal for each student is to equip them with the necessary skills, knowledge, and experience that will give them an edge in the expansive field of natural resources, environmental science, and civil engineering.

| Course Number | Name | Credit | Grade Level |
|---------------|---|------------|-----------------|
| <i>nr101#</i> | <i>Natural Res Mgt Exploratory</i> | <i>1.0</i> | <i>Grade 9</i> |
| <i>nr103#</i> | <i>Exploratory/ Natural Resource Management</i> | <i>8.0</i> | <i>Grade 9</i> |
| <i>nr201#</i> | <i>Hydrology 10</i> | <i>8.0</i> | <i>Grade 10</i> |
| <i>nr202#</i> | <i>Forestry and Silviculture</i> | <i>8.0</i> | <i>Grade 10</i> |
| nr301 | Hydrology/Soils/Surveying | 8.0 | Grade 11 |
| nr302 | Wildlife/Parks Interpretation | 8.0 | Grade 11 |
| nr401 | Wetlands/Management | 8.0 | Grade 12 |
| nr402 | Sustainability | 8.0 | Grade 12 |
| es401 | Environmental Science Theory 12 | 4.0 | Grade 12 |

*Articulated Credit Agreement with Unity College

Discontinued SY20-21

Sustainable Horticulture

Students in Sustainable Horticulture enjoy working with plants and flowers. In our labs and greenhouses, students will learn how to create marketable floral designs for a variety of occasions, maintain interior plants in a variety of settings and also learn how to grow a variety of crops, including seasonal foliage and flowering plants, tropical plants and bedding plants. In this hands-on major, students are provided with real-world work experiences for careers in the floral industry where a broad understanding of floriculture and botany are important. Students can expect to find jobs in the greenhouse industry, within interior landscape firms, as well as in floral shops.

| Course Number | Name | Credit | Grade Level |
|----------------------|---|---------------|--------------------|
| sh101 | Sustainable Horticulture Exploratory | 1.0 | Grade 9 |
| sh103 | Exploratory/ Sustainable Horticulture 9 | 8.0 | Grade 9 |
| sh200 | Sustainable Horticulture 10 | 16.0 | Grade 10 |
| sh300 | Sustainable Horticulture Technology | 16.0 | Grade 11 |
| sh404 | Advanced Concepts in Sustainable Horticulture | 20.0 | Grade 12 |
| ht401 | Horticulture Theory 12 | 4.0 | Grade 12 |

**Articulated Credit Agreement with Unity College*

TECHNOLOGY & SERVICES



Advanced Manufacturing

Advanced Manufacturing provides training and work experience across the broad spectrum of manufacturing equipment. Students learn how to manufacture metal parts using lathes, milling machines, drilling machines, and grinders. Students learn to design components on Computer Aided Design (CAD) software and build components of complex machinery including engines and tooling systems, to make robotics parts, and other projects that require precision design, manufacturing and assembly using principles of engineering.

| Course Number | Name | Credit | Grade Level |
|---------------|-------------------------------------|--------|-------------|
| mt101 | Advanced Manufacturing Exploratory | 1.0 | Grade 9 |
| mt103 | Exploratory/ Advanced Manufacturing | 8.0 | Grade 9 |
| mt200 | Advanced Manufacturing 10 | 12.0 | Grade 10 |
| mt201 | Advanced Manufacturing 10 Theory | 4.0 | Grade 10 |
| mt300 | Advanced Manufacturing 11 | 12.0 | Grade 11 |
| mt301 | Advanced Manufacturing 11 Theory | 4.0 | Grade 11 |
| mt400 | Advanced Manufacturing 12 | 16.0 | Grade 12 |
| mt401 | Advanced Manufacturing 12 Theory | 4.0 | Grade 12 |

*Articulated Credit Agreement with Central Maine Community College

^Statewide articulation agreement in place for Advanced Manufacturing

Automotive Collision Repair and Refinishing

Automotive Collision Repair and Refinishing has a curriculum based on Massachusetts Vocational Technical Educational frameworks and hands-on experience working on a wide range of vehicles. Using the latest technology in damage assessment, materials, and electronics, students learn techniques to repair vehicles with collision or cosmetic damage. Students gain experience in all areas, including welding, metal straightening, frame repair, refinishing, plastic repair, computerized paint-mixing, mechanical system repairs, electrical repairs, and damage estimating for insurance requirements.

| Course Number | Name | Credit | Grade Level |
|----------------------|--|---------------|--------------------|
| cr101 | Auto Collision and Repair Exploratory | 1.0 | Grade 9 |
| cr103 | Exploratory/ Auto Collision and Repair | 8.0 | Grade 9 |
| cr200 | Automotive Collision Rep. and Ref. 10 | 12.0 | Grade 10 |
| cr201 | Auto Collision and Repair 10 Theory | 4.0 | Grade 10 |
| cr300 | Automotive Collision Rep. and Ref. 11 | 12.0 | Grade 11 |
| cr301 | Auto Collision and Repair 11 Theory | 4.0 | Grade 11 |
| cr400 | Automotive Collision Rep. and Ref. 12 | 16.0 | Grade 12 |
| ct401 | Career Technical Theory 12 | 4.0 | Grade 12 |

Automotive Technology

Automotive Technology provides students with comprehensive training and hands-on experience working with automobiles that are complex systems, and which combine computer technology and integrated systems that include gasoline, hybrid and battery-powered engines, electronic braking systems and automated support systems for drivers. Students in the Automotive Technology program learn to diagnose automotive system problems, to repair them, and to handle general maintenance on automobiles of all kinds. The program focuses on the latest techniques and diagnostic procedures used in the industry. Students work on vehicles donated by automobile manufacturers and private citizens, as well as on automobiles needing repairs from customers within the community.

| Course Number | Name | Credit | Grade Level |
|----------------------|------------------------------------|---------------|--------------------|
| at101 | Auto Tech Exploratory | 1.0 | Grade 9 |
| at103 | Exploratory/ Automotive Technology | 4.0 | Grade 9 |
| at200 | Automotive Technology 10 | 12.0 | Grade 10 |
| at201 | Automotive Technology Theory 10 | 4.0 | Grade 10 |
| at300 | Automotive Technology 11 | 12.0 | Grade 11 |
| at301 | Automotive Technology Theory 11 | 4.0 | Grade 11 |
| at400 | Automotive Technology 12 | 16.0 | Grade 12 |
| at401 | Automotive Technology Theory 12 | 4.0 | Grade 12 |

*Articulated Credit Agreement with Central Maine Community College

^*Statewide articulation agreement in place for Automotive Technology*

Culinary Arts & Hospitality

The Culinary Arts Professional Certification Program provides students with experience in the foodservice, culinary arts, and baking industries. This program simulates a live working laboratory (i.e., restaurant, commercial bake shop, professional table service and front-of-the-house management, banquet and catering services). Students become knowledgeable and proficient with industry standards, safety, and quality workmanship. Students follow Core Curriculum based on the State of Massachusetts Vocational Technical Educational Frameworks.

| Course Number | Name | Credit | Grade Level |
|---------------|----------------------------|--------|-------------|
| cu101 | Culinary Arts Exploratory | 1.0 | Grade 9 |
| cu103 | Exploratory/ Culinary Arts | 4.0 | Grade 9 |
| cu200 | Culinary Arts 10 | 12.0 | Grade 10 |
| cu201 | Culinary Arts 10 Theory | 4.0 | Grade 10 |
| cu300 | Culinary Arts 11 | 12.0 | Grade 11 |
| cu301 | Culinary Arts 11 Theory | 4.0 | Grade 11 |
| cu400 | Culinary Arts 12 | 16.0 | Grade 12 |
| cu401 | Culinary Arts 12 Theory | 4.0 | Grade 12 |

*Articulated Credit Agreement with Culinary Institute of America

*Articulated Credit Agreement with Johnson & Wales University

*Articulated Credit Agreement with New England Culinary Institute

*Articulated Credit Agreement with North Shore Community College

^Statewide articulation agreement is available for Culinary Arts

Design and Media Communications

In Design and Media Communications, artistic and technical skills are developed through the creation and presentation of graphic and multimedia projects. Students will become versed in principles of design such as color theory, composition, and illustration. Students will learn the basics of page layout and design, typography, digital photography, video production, storyboarding, web design and communication with a client. They learn to take an idea from concept to preflight and understand the principles of prepress and outsourcing, as well as the practical aspects of the printing processes, silk screening, and various bindery equipment. Students design and produce communication products using the latest Adobe Creative Cloud software and Macintosh computer hardware, outputting files to a wide format printer, digital copier, vinyl cutter or silk screen. Integral to the program is a student-run design and copy center that trains students in customer service and business-related procedures

| Course Number | Name | Credit | Grade Level |
|---------------|----------------------------------|--------|-------------|
| dv101 | Design & Media Comm Exploratory | 1.0 | Grade 9 |
| dv103 | Exploratory/ Design & Media Comm | 4.0 | Grade 9 |
| dv200 | Design & Media Communications 10 | 12.0 | Grade 10 |
| dv201 | Design Media 10 Theory | 4.0 | Grade 10 |
| dv300 | Design & Media Communications 11 | 12.0 | Grade 11 |
| dv301 | Design Media 11 Theory | 4.0 | Grade 11 |
| dv400 | Design & Media Communications 12 | 16.0 | Grade 12 |
| ct401 | Career Technical Theory 12 | 4.0 | Grade 12 |

^Statewide articulation agreement is available for DMC

Engineering & Automation Technology

Engineering Technology & Automation is a new Chapter 74 Career and Technical program (Fall 2018) for students who are interested in understanding the design processes and applying them with real-world experiences in robotics, CNC machining, and CAD. Students in this program will learn skills related to electrical, mechanical, and manufacturing engineering, including the components and process of a system, technical writing, blueprint reading and design, and project management. Students will develop a working knowledge of electrical engineering principles and the use of 3D modeling, laser and plasma cutting, precision metal, and basic welding methods.

| Course Number | Name | Credit | Grade Level |
|---------------|-------------------------------------|--------|-------------|
| en101 | Engineering Exploratory | 1.0 | Grade 9 |
| en103 | Exploratory/ Engineering Technology | 4.0 | Grade 9 |
| en200 | Engineering Technology 10 | 12.0 | Grade 10 |
| en201 | Engineering Theory 10 | 4.0 | Grade 10 |
| en300 | Engineering Technology 11 | 12.0 | Grade 11 |
| en301 | Engineering Theory 11 | 4.0 | Grade 11 |

^Statewide articulation agreement is available for Engineering and Automation Technology

Information Technology Services

As both a Cisco and CompTIA Academy, our Information Technology Services program (ITS) prepares students for CompTIA A+, CompTIA Network+, Cisco CCENT, and Microsoft Certifications. In the course of the program, students actively learn the fundamentals of computer and networking technologies to meet the demands of the dynamic industry of Information and Communications Technology (ICT). Introduction to coding (programming) and web design are integral to the curriculum, as well as opportunities for students to work at the Essex North Shore Agricultural & Technical School Help Desk, which is responsible for maintaining, upgrading, and repairing the school's computers and printers on our Local Area Network (LAN). The Help Desk also provides technical support for the 1:1 i-Pad initiative, which provides iPads to all students, teachers and administrative staff and integrates a wide range of interactive digital media throughout the school.

| Course Number | Name | Credit | Grade Level |
|---------------|--|--------|-------------|
| its101 | Information Tech Services Exploratory | 1.0 | Grade 9 |
| its103 | Exploratory/ Information Technology Services | 8.0 | Grade 9 |
| its200 | IT Essentials | 12.0 | Grade 10 |
| its201 | Exploring Computer Science | 4.0 | Grade 10 |
| its300 | Introduction to Networks and Cyber Security | 12.0 | Grade 11 |
| its301 | Introduction to Computer Programming | 4.0 | Grade 11 |
| its400 | Routing and Switching Essentials | 12.0 | Grade 12 |
| its401 | Linux Essentials | 4.0 | Grade 12 |
| its407 | Computer Programming | 4.0 | Grade 12 |

**Articulated Credit Agreement with Central Maine Community College*

^Statewide articulation agreement is available for Information Technology Services

LIFE & NATURAL SCIENCES



Biotechnology

Biotechnology is the science of using living organisms, their products, or their component parts, for human benefit along with using technical applications that turn biological knowledge into products. Biotechnology is an interdisciplinary field that merges biology, chemistry, mathematics, computer science and engineering. It is also one of the fastest growing commercial industries, with Massachusetts being a major center for growth and innovation. This program provides students with an introduction to biotechnology and offers hands-on experience with the equipment, instrumentation, and techniques frequently used in the field.

| Course Number | Name | Credit | Grade Level |
|---------------|----------------------------------|--------|-------------|
| bt101 | Biotechnology Exploratory | 1.0 | Grade 9 |
| bt103 | Exploratory/ Biotechnology 9 | 8.0 | Grade 9 |
| bt200 | Biotechnology 10 | 16.0 | Grade 10 |
| bt300 | Biotechnology 11 | 16.0 | Grade 11 |
| bt400 | Biotechnology 12 | 16.0 | Grade 12 |
| bt401 | Introduction to Computer Science | 4.0 | Grade 12 |

Cosmetology

Students in Cosmetology will develop the creative and technical skills required to be successful in the field, which encompasses a broad range of services and customer-focused products. Students learn how to perform all aspects of the program including hair, skin, nail care and personal responsibility, as well as the professional work ethics needed to secure employment in the industry. Hours spent learning and practicing these skills are eligible to be recorded with the state (towards a Massachusetts Cosmetology Operator's License requirements) once a student turns 16 years of age. Upon the completion of 1000 theory and practical hours, each student will have the opportunity to take the State Board Licensing Exam and receive an operator's license to become a contributing professional in the industry. Each graduate of the Cosmetology program has the opportunity to receive a high school diploma, a certificate of completion, and be able to sit for the State Board License Exam.

| Course Number | Name | Credit | Grade Level |
|----------------------|----------------------------|---------------|--------------------|
| co101 | Cosmetology Exploratory | 1.0 | Grade 9 |
| co103 | Exploratory/ Cosmetology | 8.0 | Grade 9 |
| co200 | Cosmetology 10 | 12.0 | Grade 10 |
| co201 | Cosmetology 10 Theory | 4.0 | Grade 10 |
| co300 | Cosmetology 11 | 12.0 | Grade 11 |
| co301 | Cosmetology 11 Theory | 4.0 | Grade 11 |
| co400 | Cosmetology 12 | 16.0 | Grade 12 |
| ct401 | Career Technical Theory 12 | 4.0 | Grade 12 |

Dental Assisting

Dental Assisting provides a comprehensive education in the field. Each student is given the opportunity to learn dental procedures through academic and practical instruction. Students receive clinical experience at Tufts University School of Dental Medicine as well as in our state-of-the-art dental clinic. Upon successful completion of a rigorous three-year curriculum, students are prepared for the certification examinations required for licensing by the Dental Assisting National Board. Students at Essex North Shore Agricultural & Technical School will be prepared to sit for the Infection Control Examination (ICE), the Radiology Health and Safety (RHS) examinations, and the Anatomy, Morphology and Physiology (AMP) examination, leading to NELDA certification through the Dental Assistant National Board (DANB). Students complete Healthcare Provider CPR and First Aid as juniors.

| Course Number | Name | Credit | Grade Level |
|----------------------|--------------------------------|---------------|--------------------|
| da101 | Dental Assisting Exploratory | 1.0 | Grade 9 |
| da103 | Exploratory/ Dental Assisting | 8.0 | Grade 9 |
| da200 | Dental Assisting 10 | 16.0 | Grade 10 |
| da300 | Dental Assisting 11 | 16.0 | Grade 11 |
| da400 | Dental Assisting 12 | 16.0 | Grade 12 |
| 3450 | Anatomy & Physiology Theory 12 | 4.0 | Grade 12 |

Environmental Technology

(concluding with the graduating classes of 2021 and 2022)

The Environmental Technology program is an inquiry-based, project-oriented curriculum developing student skills in collecting and analyzing environmental data. Our field-based program immerses students into the full range of New England environments, including mountains, forests, ponds, streams, coastal shorelines, and the ocean. Our overall goal for each student is to develop a well-rounded portfolio, or “tool box”, of technical skills necessary for successful employment in the competitive environmental science field or for further education.

| Course Number | Name | Credit | Grade Level |
|----------------------|--|---------------|--------------------|
| et101# | <i>Environmental Technology Exploratory</i> | 1.0 | Grade 9 |
| et103# | <i>Exploratory/ Environmental Technology</i> | 4.0 | Grade 9 |
| et201# | <i>Forest Ecology</i> | 8.0 | Grade 10 |
| et202# | <i>Fisheries/Aquaculture</i> | 8.0 | Grade 10 |
| et301 | Environmental Impacts | 8.0 | Grade 11 |
| et302 | Coastal Marine Ecology | 8.0 | Grade 11 |
| et401 | Wetlands and Wastewater | 4.0 | Grade 12 |
| et402 | Hazmat | 8.0 | Grade 12 |
| et403 | Research Methods | 4.0 | Grade 12 |
| es401 | Environmental Science Theory 12 | 4.0 | Grade 12 |

Discontinued SY 20-21

Health Assisting

The Health Assisting program trains students to become certified nursing assistants with advanced skill training in electrocardiology and phlebotomy. This program is also an excellent foundation for nursing, physical therapy, athletic training or other health-related fields requiring college degrees. In this program, students will have the opportunity to become certified in both ECG and phlebotomy through the National Healthcare Association. Medical terminology is taught throughout the senior year, and students can receive three credits at North Shore Community College upon completion with a B grade or higher for this class. Students become certified in both CPR-Healthcare Provider and First Aid.

| Course Number | Name | Credit | Grade Level |
|----------------------|--------------------------------|---------------|--------------------|
| ha101 | Health Assisting Exploratory | 1.0 | Grade 9 |
| ha103 | Exploratory/ Health Assisting | 8.0 | Grade 9 |
| ha200 | Health Assisting 10* | 16.0 | Grade 10 |
| ha300 | Health Assisting 11 | 16.0 | Grade 11 |
| ha400 | Health Assisting 12* | 16.0 | Grade 12 |
| 3450 | Anatomy & Physiology Theory 12 | 4.0 | Grade 12 |

*Articulated Credit Agreement with North Shore Community College.

^Statewide Articulation agreement is available for Health Assisting

CONSTRUCTION TECHNOLOGY



Carpentry

Carpentry is one of the oldest and most respected professions. In this program, students begin with small woodworking projects to learn how to use basic tools and gain experience, as well as learning different concepts of building. Students learn measuring, cutting, fastening, and hand/power tool use. All students are certified in the 10-Hour OSHA CareerSafe program. Licenses that may be obtained through the Carpentry program include: Hilti and Ramset Powder Actuated Tool Licenses, ICC Certification for Residential Building Codes, and One-Year Creditable Service towards the Construction Supervisor License (CSL) work requirements.

| Course Number | Name | Credit | Grade Level |
|---------------|------------------------|--------|-------------|
| cp101 | Carpentry Exploratory | 1.0 | Grade 9 |
| cp103 | Exploratory/ Carpentry | 8.0 | Grade 9 |
| cp200 | House Carpentry 10 | 12.0 | Grade 10 |
| cp201 | Carpentry 10 Theory | 4.0 | Grade 10 |
| cp300 | House Carpentry 11 | 12.0 | Grade 11 |
| cp301 | Carpentry 11 Theory | 4.0 | Grade 11 |
| cp400 | House Carpentry 12 | 16.0 | Grade 12 |
| cp401 | Carpentry 12 Theory | 4.0 | Grade 12 |

^Statewide articulation agreement available for Carpentry

Construction Craft Laborers

The construction industry is one of the most diverse and rewarding industries in the world. The program prepares students for meaningful employment in a variety of areas. The major types of construction are grouped into the following categories;

1. Building-construction and reconstruction of residential and commercial buildings.
2. Highway, Utilities and Land Development-construction and reconstruction of the following; major and minor highways, subdivisions, bridges, dams, tunnels and airfields, underground utilities (telephone & electric), piping systems (petroleum, water, sewer, natural gas and collection systems).
3. Environmental-remediation and activities associated with the following; asbestos abatement, decontamination and demolition of nuclear facilities, hazard waste removal, lead abatement, permit-required confined spaces, erosion control

| Course Number | Name | Credit | Grade Level |
|---------------|---------------------------------|--------|-------------|
| ccl101 | Construction Craft Exploratory | 1.0 | Grade 9 |
| ccl103 | Exploratory/ Construction Craft | 8.0 | Grade 9 |
| ccl200 | Construction Craft 10 | 12.0 | Grade 10 |
| ccl201 | Construction Craft 10 Theory | 4.0 | Grade 10 |
| ccl300 | Construction Craft 11 | 12.0 | Grade 11 |
| ccl301 | Construction Craft 11 Theory | 4.0 | Grade 11 |
| ccl400 | Construction Craft 12 | 16.0 | Grade 12 |
| ccl401 | Construction Craft 12 Theory | 4.0 | Grade 12 |

Electricity

The Electricity Program prepares students for meaningful employment in the fields of electrical contracting, design, or engineering. Achieving proficiency in Electricity requires a systematic progression beginning with apprenticeship during high school (co-op) or upon graduation. Students are placed with local electrical contractors based on their specific skill sets and applicability to contractor business models. Prior to internships or co-op work, the students are prepared with a comprehensive curriculum based on Massachusetts frameworks and National Standards.

| Course Number | Name | Credit | Grade Level |
|---------------|---------------------------|--------|-------------|
| el101 | Electricity Exploratory | 1.0 | Grade 9 |
| el103 | Exploratory/ Electricity< | 8.0 | Grade 9 |
| el200 | Electricity 10< | 12.0 | Grade 10 |
| el201 | Electricity 10 Theory< | 4.0 | Grade 10 |
| el300 | Electricity 11< | 12.0 | Grade 11 |
| el301 | Electricity 11 Theory< | 4.0 | Grade 11 |
| el400 | Electricity 12< | 16.0 | Grade 12 |
| el401 | Electricity 12 Theory< | 4.0 | Grade 12 |

< Graduates earn **UP TO** 300 of the 600 required hours of classroom time and **UP TO** 1500 of the 8000 hours of the required on-the-job training time toward their electrical apprenticeship.

Heating, Ventilation, Air Conditioning & Refrigeration

Students in the HVAC/Refrigeration Program learn to troubleshoot issues, install, and repair a broad range of heating and cooling systems, including window and central air conditioning, refrigeration systems, and various heating systems. All HVAC students receive the OSHA 10-Hour CareerSafe certification and are taught how to adhere to safety guidelines in the HVAC industry. Students study different heating systems; for example, gas, oil, and electrical. Experience troubleshooting oil- and gas-fired burners for heating systems extend students' experience. The curriculum includes significant experience with electricity, because electrical controls are involved. Students are prepared for the EPA 608 certification exam.

| Course Number | Name | Credit | Grade Level |
|---------------|---------------------------------------|--------|-------------|
| hv101 | HVACR Exploratory | 1.0 | Grade 9 |
| hv103 | Exploratory/ HVAC & Refrigeration 9 > | 8.0 | Grade 9 |
| hv200 | HVACR 10> | 12.0 | Grade 10 |
| hv201 | HVACR 10 Theory> | 4.0 | Grade 10 |
| hv300 | HVACR 11> | 12.0 | Grade 11 |
| hv301 | HVACR 11 Theory> | 4.0 | Grade 11 |
| hv400 | HVACR 12> | 16.0 | Grade 12 |
| ct401 | Career Technical Theory 12 | 4.0 | Grade 12 |

>Students enrolled in HVACR can earn **up to 361** Theory hours and **up to 1152** shop hours towards their refrigeration technician license.

Landscaping & Turf Management

The Landscape/Turf Management program teaches the necessary skills in the design, maintenance, and management aspects of landscaping and the broad range of turf management, from sports turf installation and maintenance through commercial property landscaping and management. Students learn to plan for and deal with climate and moisture, how to design landscape and hardscape effects for various conditions and settings, such as urban, suburban or rural, and how to accommodate climate and weather. Landscape/Turf management takes a broad approach to providing students with a wide range of experiences that will allow them to choose a focus for careers or for further education.

| Course Number | Name | Credit | Grade Level |
|---------------|--|--------|-------------|
| ls101 | Landscaping & Turf Mgt Exploratory | 1.0 | Grade 9 |
| ls103 | Exploratory/ Landscaping & Turf Management | 8.0 | Grade 9 |
| ls200 | Landscape Design 10 | 12.0 | Grade 10 |
| ls201 | Landscape Theory 10 | 4.0 | Grade 10 |
| ls300 | Landscape Design 11 | 12.0 | Grade 11 |
| ls301 | Landscape Theory 11 | 4.0 | Grade 11 |
| ls400 | Landscape Design 12 | 16.0 | Grade 12 |
| ht401 | Horticulture Theory 12 | 4.0 | Grade 12 |

Masonry & Tile Setting

Throughout the Masonry and Tile Setting program students learn the fundamentals of masonry for construction and landscaping. Included is the art of laying brick, block, glass block, and stone, along with pouring concrete and tile setting. Through a series of projects, students will have hands-on experience constructing segmented retaining walls and installing concrete pavers, building chimneys, designing and installing brick and stone facing, decorative stone and concrete, as well as various floors and walks using stone, slate, brick, tile or pavers. Working with the Massachusetts Building Codes, reading blueprints, creating proposals and working on team projects both in our labs and off-campus provide students with hands-on masonry experience.

| Course Number | Name | Credit | Grade Level |
|----------------------|---------------------------------------|---------------|--------------------|
| ms101 | Mason and Tile Setting Exploratory | 1.0 | Grade 9 |
| ms103 | Exploratory/ Mason and Tile Setting 9 | 8.0 | Grade 9 |
| ms200 | Mason and Tile Setting 10 | 12.0 | Grade 10 |
| ms201 | Mason and Tile Setting 10 Theory | 4.0 | Grade 10 |
| ms300 | Masonry and Tile Setting 11 | 12.0 | Grade 11 |
| ms301 | Mason and Tile Setting 11 Theory | 4.0 | Grade 11 |
| ms400 | Mason and Tile Setting 12 | 16.0 | Grade 12 |
| ct401 | Career Technical Theory 12 | 4.0 | Grade 12 |

Plumbing

Plumbing is a licensed trade that requires not only specific technical knowledge and skill, but also a thorough understanding of the Massachusetts State Plumbing and Fuel Gas Code as well as a general understanding of the construction trades. Graduates will be working across the building and construction industry and, therefore, need to understand the relationship of plumbing to the wider arena of construction trades such as electrical, carpentry, masonry and HVAC. Students learn water supply and distribution, sanitary waste and venting, natural gas supply and distribution, pipe fitting, and fixture and appliance installation. Students learn the installation, operation and maintenance of hydronic heating systems, how to read blueprints, and how to estimate and propose plumbing projects.

| Course Number | Name | Credit | Grade Level |
|----------------------|------------------------|---------------|--------------------|
| pl101 | Plumbing Exploratory | 1.0 | Grade 9 |
| pl103 | Exploratory/ Plumbing> | 8.0 | Grade 9 |
| pl200 | Plumbing 10> | 12.0 | Grade 10 |
| pl201 | Plumbing 10 Theory> | 4.0 | Grade 10 |
| pl300 | Plumbing 11> | 12.0 | Grade 11 |
| pl301 | Plumbing 11 Theory> | 4.0 | Grade 11 |
| pl400 | Plumbing 12> | 16.0 | Grade 12 |
| pl401 | Plumbing 12 Theory> | 4.0 | Grade 12 |

>Plumbing students can earn up to 330 total theory hours (Tiers 1, 2, and 3) and 1700 work/shop hours toward their plumbing apprenticeship.

OTHER CTE COURSES

Career Enrichment 10

Course #: ce201

Credits: 2

This course examines professional workplace behavior while focusing on the important steps necessary for preparing to enter the workplace. Students work individually and in small groups to learn about jobs vs. careers, the job search process, interview skills, effective workplace communication, resume and cover letter writing, and developing a professional work ethic. This is a semester class.

Career Enrichment 11

Course #: ce301

Credits: 2

This course continues to examine professional workplace skills necessary to be successful in today's complex and dynamic job market. Students work individually and in small groups to explore important workplace qualities such as dependability, consistency, and responsibility, the decision-making process, teamwork, professionalism, while revisiting the job search process, refining and customizing resume and cover letter writing, and strategies to use during the interview process. This is a semester class.

Career Enrichment 12

Course #: ce401

Credits: 2

This course completes the three-year Career Enrichment sequence in order to transition students well to enter the workplace beyond high school. Students learn how to conduct online job searches, apply for senior scholarships, discuss important financial literacy skills, explore professionalism in the workplace, and finalize senior portfolios. This is a semester class.

CTE ELECTIVE CLASS

Business and Entrepreneurship - Grade 11

Course #: 7321

Level: CP

Credits: 2

This elective course is focused on the foundational skills necessary for students to be successful in their career pathway. Many students will secure coop placements with local companies in a field they wish to pursue beyond high school. In-school co-op placements are also arranged, and juniors remaining in the building have the chance to work on contracted work such as setting up social media accounts and performing bookkeeping for local businesses. Students can also pursue advanced certifications to further their employment opportunities or take the next steps to launch a product they have developed in their CTE area. This is a semester class.



ESSEX NORTH SHORE
AGRICULTURAL & TECHNICAL SCHOOL

ACADEMIC COURSE OFFERINGS



Massachusetts Department of
ELEMENTARY & SECONDARY
EDUCATION



NEW ENGLAND ASSOCIATION
OF SCHOOLS AND COLLEGES

ENGLISH CORE COURSES

English Grade 9

Course #: 1102, 1101, 1100

Level: Honors, ACP, CP

Credits: 4

This course begins the four-year English Language Arts curriculum aligned with *The Massachusetts Curriculum Framework for English Language Arts and Literacy*. Students experience a broad range of literature, including non-fiction informational texts, fiction, drama, and poetry with an emphasis on critical thinking and analysis. Each unit is anchored by a text that allows students to learn critical reading and various writing modes to establish a foundation for success in all subsequent years. Students will be expected to participate in class discussion, respond to daily, in-class writing-to-learn activities, and deliver frequent oral presentations. MCAS close reading sets and test taking strategies are embedded into the curriculum and students will complete a series of common formative and summative assessments throughout the year.

English Grade 10

Course #: 1202, 1201, 1200

Level: Honors, ACP, CP

Credits: 4

This course deepens students focus on acquiring the reasoning and analytical skills associated with literature and rhetoric, and the course will continue to focus on helping students make connections between literary and thematic elements and text-based support established in freshman year. Anchor and linking texts span long and short fiction, drama, and nonfiction. Synthesis of multiple texts will be integral to the curriculum, and students will complete classroom activities along with formative and summative assessments requiring synthesis throughout the year. Students will complete a series of common formative and summative assessments throughout the year.

English Grade 11

Course #: 1302, 1301, 1300

Level: Honors, ACP, CP

Credits: 4

This course examines American literature through fiction, nonfiction, poetry and drama from multiple perspectives. Students will analyze texts through stylistic, social, economic, historical, and critical lenses. The emphasis of this course is evaluating the relationship between form and content in a literary work, and then analyzing how both the author's intent and reader's perspective illuminate the meaning of the text. Students will produce short narratives, dramatic scenes, oral presentations, and analytical essays.

Advanced Placement in English Language and Composition - Grade 11

Course #: 1303

Level: AP

Credits: 4

In the A.P. English Language and Composition course—the rhetoric course—students learn how to analyze, synthesize, and evaluate nonfiction texts, including essays, biographies and autobiographies, speeches, sermons, and passages from writings in the arts, history, social science, politics, science, and other areas of study. Students learn to evaluate and construct arguments drawn from articles in newspapers, magazines, and online “zines” and “blogs.” The course cannot help but be interdisciplinary, immersing students in a variety of sources. Students are expected to take the College Board A.P. English Language and Composition Exam in May. College credit may be applied with a score of three or higher on the College Board exam.

English Grade 12

Course #: 1402, 1401, 1400

Level: Honors, ACP, CP

Credits: 4

This course focuses on a variety of literary and informational texts that include the Western cultural philosophies of nihilism, modernism, idealism, existentialism, and magical realism, including rigorous practice in research, informational writing, and personal narrative. Students will identify critical lenses, recognize multiple themes, analyze in concrete and abstract perspectives, and evaluate multiple interpretations from secondary sources. Students will draw evidence from literary or informational texts to support their analysis, reflection, and research. Essays and discussions will relate the work to its historical circumstances, trace a symbol through a work or works, or consider a moral or philosophical question. The major works and ideas of Western literature will be addressed.

Advanced Placement English Literature and Composition - Grade 12

Course #: 1403

Level: AP

Credits: 4

In the A.P. English Literature and Composition course, students engage in becoming skilled readers of prose and poetry written in a variety of rhetorical contexts, and in becoming skilled writers who compose for a variety of purposes. Through critical analysis and focused writing, students learn the interactions among a writer's purposes, audience expectations, and subjects, as well as the way genre conventions and the resources of language contribute to effectiveness in writing. The course follows A.P. curricular guidelines and prepares students for the A.P. test, given in the spring. Students should expect challenging college-level content and a workload requiring nightly preparation and independent study. The accelerated pace of A.P. coursework is designed to parallel an introductory college semester course. Students are expected to take the College Board A.P. English Literature and Composition Exam in May. College credit may be applied with a score of three or higher on the College Board exam.

HISTORY CORE COURSES

World History - Grade 9

Course #: 4102, 4101, 4100

Level: Honors, ACP, CP

Credits: 4

This course examines the major changes that shaped the modern world, beginning with the Middle Ages through the eve of World War I. Major units include the Renaissance, the Age of Exploration, the Reformation and Counter-Reformation, Scientific Revolution and the Enlightenment, the Age of Absolutism, the French Revolution, the early Industrial Revolution, and Imperialism. The emphasis will be on the skills students need to become discerning historical thinkers: understanding geography; reading charts, graphs and tables; recognizing and understanding diverse viewpoints; comparing and contrasting information; conducting research, writing historical essays; working with primary and secondary source documents, and making presentations. Student learning will be assessed through homework, research, class participation, tests, quizzes, document-based questions, and historical analysis essays.

United States History I - Grade 10

Course #: 4202, 4201, 4200

Levels: Honors, ACP, CP

Credits: 4

This course is the first part of a sequence of United States history that will be completed the following year in Grade 11. The goal is to deepen student understanding of the United States by examining the events leading up

to the American Revolution to the early twentieth century. Major units include the study of the Constitution, the Early Republic, Jacksonian Democracy, Manifest Destiny, sectionalism, the U.S. Civil War, industrialization in the U.S., and U.S. Imperialism. Students will conduct critical reading and analysis using a variety of content to hone proficiency in primary and secondary source evaluation, evaluate cause and effect, develop and prove claims with evidence, and make inferences by critically evaluating content and writing supported arguments. Students will also begin publishing formal research papers with cited sources. Independent reading is a component of United States History I.

United States History II - Grade 11

Course #: 4302, 4301, 4300

Levels: Honors, ACP, CP

Credits: 4

This course completes the second part of a sequence of United States history begun in Grade 10, by examining the major events in U.S. history from World War I to the 1960s. Major units include the study of World War I, the Great Depression and the New Deal, the Rise of Dictators, World War II, the Cold War, Civil Rights, the Vietnam War and Social Changes in the 1960s. As in previous years, students will continue to refine their critical reading and analytical writing, source evaluation, use of primary source documents, ability to make claims, evidence, and interpretation, and research methods. Honors students will pursue an accelerated program adding document analysis, debate, and rigorous practice writing supported essays based on synthesizing multiple sources. Please note that the U.S. History II Honors program is a pre-Advanced Placement curriculum that will require regular and significant preparation by reading and writing outside of class.

Advanced Placement United States History - Grade 11

Course #: 4303

Level: AP

Credits: 4

A.P. United States History is designed to give grade 11 students a thorough understanding of United States History, requiring students to master historical interpretation, critical and analytical thinking, essay writing, and the integration of primary and secondary sources. The class prepares students to assess historical data and documents, evaluate relevance and reliability, and demonstrate historical knowledge of United States History. This course is equivalent to a full-year introductory college class and, therefore, all students enrolled in this course are expected to demonstrate their content mastery by taking the Advanced Placement exam in May. Please note that summer work is required.

MATHEMATICS CORE COURSES

Algebra I - Grade 9

Course #: 2102, 2101, 2100

Level: Honors, ACP, CP

Credits: 4

This course addresses the Common Core Standards for Algebra 1. Algebra I focuses on four critical areas: (1) deepen and extend understanding of linear and exponential relationships; (2) contrast linear and exponential relationships with each other and engage in methods for analyzing, solving, and using quadratic functions; (3) extend the laws of exponents to square and cube roots; and (4) apply linear models to data that exhibit a linear trend.

Geometry - Grade 9

Course #: 2122, 2121

Level: Honors and ACP

Credits: 4

This course transitions capable students who have successfully completed Algebra I in Grade 8 to introduce students to the *Massachusetts Mathematics Curriculum Framework* (2017) learning standards for Geometry. Geometry focuses on six critical areas: (1) establish criteria for congruence of triangles based on rigid motions; (2) establish criteria for similarity of triangles based on dilations and proportional reasoning; (3) informally develop explanations of circumference, area, and volume formulas; (4) apply the Pythagorean Theorem to the coordinate plane; (5) prove basic geometric theorems; and (6) extend work with probability. As the year progresses, students explore more complex geometric situations and deepen their explanations of geometric relationships by presenting and hearing formal mathematical arguments.

Algebra II - Grade 10

Course #: 2232, 2231

Level: Honors and ACP

Credits: 4

Continuing the progression for entering Grade 10 students who successfully completed Geometry in Grade 9, this course addresses the *Massachusetts Mathematics Curriculum Framework* (2017) learning standards for Algebra II. The focus is on the following four critical areas: (1) relate arithmetic of rational expressions to arithmetic of rational numbers; (2) expand understandings of functions and graphing to include trigonometric functions; (3) synthesize and generalize functions and extend understanding of exponential functions to logarithmic functions; and (4) relate data display and summary statistics to probability and explore a variety of data collection methods. Students work closely with the expressions that define the functions, are facile with algebraic manipulations of expressions, and continue to expand and hone their abilities to model situations and to solve equations, including solving quadratic equations over the set of complex numbers and solving exponential equations using the properties of logarithms.

Geometry - Grade 10

Course #: 2202, 2201, 2200

Level: Honors and ACP

Credits: 4

This course addresses the Common Core Standards for Geometry. Geometry focuses on six critical areas: (1) establish criteria for congruence of triangles based on rigid motions; (2) establish criteria for similarity of triangles based on dilations and proportional reasoning; (3) informally develop explanations of circumference, area, and volume formulas; (4) apply the Pythagorean Theorem to the coordinate plane; (5) prove basic geometric theorems; and (6) extend work with probability.

Algebra II - Grade 11

Course #: 2302, 2301, 2300

Level: Honors, ACP, CP

Credits: 4

This course is a continuation of algebraic concepts. Topics include functions and graphs and more complex problem solving, complex numbers, matrices to solve linear systems, vectors, analytic trigonometry, and relates the connections between the fundamental concepts of algebra, trigonometry and analytic geometry. Several standards in the Algebra II course were moved to the Enhanced Algebra I course which made it possible to add standards from the Pre-calculus Course to the Enhanced Algebra II course. In this way students will be prepared for Calculus after successful completion of Enhanced Algebra II. This is a course which covers material at a fast pace and in great depth, with the expectation of stronger student performance. A greater emphasis will be placed on algebraic approaches to problem-solving.

Pre-Calculus - Grade 11

Course #: 2322

Level: Honors and ACP

Credits: 4

Continuing the progression for entering Grade 11 students who successfully completed Algebra II in Grade 10 and based on the *Massachusetts Mathematics Curriculum Framework* (2017) learning standards, this course combines the trigonometric, geometric, and algebraic techniques needed to prepare students for the study of calculus, and strengthens students' conceptual understanding of problems and mathematical reasoning in solving problems. Facility with these topics is especially important for students intending to study calculus, physics, and other sciences, and/or engineering in college. Because the standards for this course are (+) standards, students selecting this Model Precalculus course should have met the college and career ready standards. Instructional time will focus on four critical areas: (1) extend work with complex numbers; (2) expand understanding of logarithms and exponential functions; (3) use characteristics of polynomial and rational functions to sketch graphs of those functions; and (4) perform operations with vectors.

NOTE: Students who have not met the Competency Determination in Mathematics by earning the equivalent of a *Proficient* score of 240 or better on the Grade 10 Mathematics MCAS will be required to enroll in Algebra III during Grade 12. For more information see:

<http://www.doe.mass.edu/ccr/epp/qa.html>

Algebra III/Trigonometry - Grade 12

Course #: 2400

Level: CP

Credits: 4

This course is a continuation of concepts presented in Algebra II. It will emphasize the connection between algebra, geometry and trigonometry. The focus of this course is exponential/logarithmic functions, polynomials, trigonometric functions and trigonometric identities.

Pre-Calculus - Grade 12

Course #: 2402, 2401

Level: Honors and ACP

Credits: 4

This course addresses the Learning Standards for Precalculus and focuses on four critical areas: (1) extend work with complex numbers; (2) expand understanding of logarithms and exponential functions; (3) use characteristics of polynomial and rational functions to sketch graphs of those functions; and (4) perform operations with vectors.

Calculus - Grade 12

Course #: 2412

Level: Honors

Credits: 4

This course is for students who have successfully completed Algebra II Enhanced. The course will include a brief review of the critical concepts and skills covered in Algebra II Enhanced followed by the concepts of limit, derivative, and definite and indefinite integral. Techniques of numerical and closed form integration with applications of the definite and indefinite integrals will be studied.

Advanced Placement Calculus AB - Grade 12

Course #: 2443

Level: AP

Credits: 4

A.P. Calculus is a full year mathematics course, structured to closely resemble a first semester Calculus course in college. It is the intent of the course to develop a conceptual understanding and computational fluency in the basics of differential and integral calculus. This course will emphasize basic techniques, problem solving skills, critical thinking, and an understanding of various applications of calculus. Technology will also be emphasized as a problem-solving tool. Students will apply the techniques learned to a variety of different types of functions

as well as different representations of functions, and use these to model real-world situations. The course will also introduce basic differential equations, and use them to model growth.

SCIENCE CORE COURSES

Biology I - Grade 9

Course #: 3102, 3101, 3100

Level: Honors, ACP, CP

Credits: 4

This course introduces students to a two-year sequence in the study of biological sciences and the specific terminology and methodology relating to the basic concepts of life and its processes. The course begins with a short, standards-based, introductory unit: Scientific Skills and Metrics that will be used to review and enhance student understanding of scientific investigation. The remaining learning standards for Biology I provide the foundation for the following three units: Chemistry of Life; Cell Biology; DNA and Genetics and are based on the Massachusetts Science and Technology/Engineering Curriculum Framework.

Biology II - Grade 10

Course #: 3202, 3201, 3200

Level: Honors, ACP, CP

Credits: 4

This course completes the second year of the two-year sequence in the study of biological sciences and the specific terminology and methodology relating to the basic concepts of life and its processes. Learning standards for Biology II serve as the foundation for the following three units: Ecology; Evolution and Biodiversity; Anatomy and Physiology and are based on the Massachusetts Science and Technology/Engineering Curriculum Framework.

Advanced Placement Biology - Grade 10

Course #: 3203

Level: AP

Credits: 8

A.P. Biology is an introductory college-level course. Students cultivate their understanding of biology through inquiry-based investigations as they explore the following topics: evolution, cellular processes-energy and communication, genetics, information transfer, ecology, and interactions. Students are expected to take the College Board A.P. Biology Exam in May. College credit may be applied with a score of three or higher on the College Board exam.

Chemistry - Grade 11

Course #: 3302, 3301, 3300

Level: Honors, ACP, CP

Credits: 4

This course is designed to teach students the concepts of composition, structure and properties of substances and the changes they will undergo. Topics will include the classification of matter, atomic structure, periodic table and chemical formulas, chemical reactions and gas laws. Students will utilize qualitative as well as quantitative approaches to predict outcomes and identify unknowns. Use of a scientific calculator is required. Strong math skills are recommended for the Honors Level.

Physics - Grade 11

Course #: 3312, 3311, 3310

Level: Honors, ACP, CP

Credits: 4

This Physics course will introduce key concepts of the physical world including motion, energy, and electromagnetism. Hands on labs will reinforce these concepts. Measurement and problem solving including

graphing and critical thinking will be introduced. Technology will be used to analyze data collected in lab activities. Use of a scientific calculator is required. Strong math skills are recommended for the Honors Level.

Sustainability Science - Grade 11

Course #: 3350

Level: CP

Credits: 4

This lab-based course focuses on the application of science through the lens of sustainability to better understand the interrelationship between humans and their impact on the planet. After examining energy in the Earth, the structure and composition of the atmosphere, circulation of the oceans and atmosphere, and climate variations over time, students will learn about sustainable practices that are best suited to help promote and maintain a better ecological balance. Students will conduct research, analyze case studies, participate in several hands-on labs, and develop a problem-solving project using the scientific method.

Chemistry - Grade 12

Course #: 3402, 3401, 3400

Level: Honors, ACP, CP

Credits: 4

This course is designed to teach students the concepts of composition, structure and properties of substances and the changes they will undergo. Topics will include the classification of matter, atomic structure, periodic table and chemical formulas, chemical reactions and gas laws. Students will utilize qualitative as well as quantitative approaches to predict outcomes and identify unknowns. Use of a scientific calculator is required. Strong math skills are recommended for the Honors Level.

Physics - Grade 12

Course #: 3412, 3411, 3410

Level: Honors, ACP, CP

Credits: 4

This Physics course will introduce key concepts of the physical world including motion, energy, and electromagnetism. Hands on labs will reinforce these concepts. Measurement and problem solving including graphing and critical thinking will be introduced. Technology will be used to analyze data collected in lab activities. Use of a scientific calculator is required. Strong math skills are recommended for the Honors Level.

Advanced Placement Physics - Grade 12

Course #: 3413

Level: AP

Credits: 4

A.P. Physics 1 is an algebra-based, introductory college-level physics course that will address the principles of Newtonian mechanics; work, energy, and power; mechanical waves and sound; and introductory, simple circuits. Laboratory-based inquiry learning will develop students' scientific critical thinking and reasoning skills. There is a mandatory summer assignment. Students are expected to take the College Board A.P. Physics Exam in May. College credit may be applied with a score of three or higher on the College Board exam. (Exam is scored from 1 – 5).

SPANISH CORE COURSES

Spanish I - Grade 9

Course #: 6100

Level: CP

Credits: 4

This required course introduces students to the Spanish language by learning Spanish in preparation for the workplace. Students learn vocabulary and concepts of basic grammar acquisition, allowing them to communicate information about themselves and others using simple sentences, both orally and in writing. The practice of all four language skills: listening, speaking, reading, and writing, helps students solidify their acquisition of the Spanish language. Active participation in class activities and completion of homework assignments are required.

Spanish I - Grade 9

Course #: 6101

Level: ACP

Credits: 4

This required course is designed for students who have successfully studied Spanish in middle school and will continue to develop their Spanish-speaking skills with a focus on the workplace. Listening, speaking, reading and writing skills are developed through grammar acquisition, oral presentations, dialogs, as well as reading and writing assignments. Students will be expected to respond in Spanish to questions posed by their peers and their teacher, to write conversations and dramatize them. Connections to the workplace will be presented in class through videos, music and selected readings from a variety of sources.

ACADEMIC ELECTIVE COURSES

UNDERSTANDING HIGHER EDUCATION

Understanding Higher Education - Grade 10 (Early College Course Elective - Semester 1 ONLY)

Course #: ec4204

Level: CP

Credits: 4

This Early College course provides an introduction to higher education, including the different purposes, functions, and structures of postsecondary institutions. Students will gain a comprehensive understanding of degree and career pathways available across institutional types as well as familiarity with the social and emotional factors that influence student persistence and completion across educational settings. A variety of contemporary issues in higher education will be explored, with particular emphasis on the ways in which student experiences intersect with these issues. Topics include, but are not limited to, academic discourse, social-emotional learning, educational planning, financial planning, college placement options, prerequisites/corequisites, and teaching and learning modalities. This Early College course will be taught by an ENSATS instructor and NSCC faculty. **Learning will take place on both the ENSATS and NSCC campuses and transportation will be provided.** Successful completion of this Early College course will result in students earning both ENSATS high school credit along with NSCC college credit. This course is a Semester 1 only class.

HISTORY & SOCIAL SCIENCES ELECTIVES

United State Government and Politics - Grade 10

Course #: 4210

Level: CP

Credits: 2

This course is designed to provide tenth-grade students with a basic knowledge of the purpose, structure, and operation of the national and state governmental systems. The primary content of study is the Federal system and its underlying principles as they are related to National, State, and local levels. This course will be a thought-provoking exploration taught through the lens of current events into the United States Government and Politics. We will cover such topics as the Constitution, civil rights, interest groups, politics, voting, Congress, the Presidency, the Judiciary, laws, public policies, state & local government. This course is a semester class.

Law and the Workplace - Grade 11

Course #: 4350

Level: CP

Credits: 2

This elective course is designed to introduce students to the legal system, focusing on landmark American trials, key constitutional cases, and current legal issues related to business, employment, and the workplace. Additional topics include computer law, financial crimes, contracts and business organization. The course design and approach are to learn law in a practical, relevant, and experiential way through a case-study approach. The class blends legal content with hands-on learning that allows for students to read critically, to discuss interpretations of law and to debate with the goal of helping students understand their rights and responsibilities under the laws so they can function as responsible citizens in their professional and personal lives. This course is a semester class.

Genocide Studies - Grade 12

Course #: 4481, 4482

Level: ACP, Honors

Credits: 2

This course examines the 20th century as “the century of genocide,” beginning with the Armenian genocide, the horrors of the Holocaust, and ending with the atrocities in Bosnia and Rwanda and the violence in Darfur, the Democratic Republic of Congo, and Northern Iraq. We will consider many questions in this course: What is genocide? Where did the term come from and how has it been defined and examined over time? What conditions lead to genocide? What are the warning signs? What allows people to act in such evil ways and what causes others to stand by? How can genocide be prevented? Which genocides have been emphasized, and which have been overlooked? We will explore these and other ideas through a historical lens, with critical review of primary sources and research, and through a literary lens, with first-hand accounts and survivor testimony. This course is a semester class.

Using History to Understand Contemporary Issues - Grade 12

Course #: 4410

Level: CP

Credits: 2

The 21st century has brought with it unprecedented access to information through various media sources. This presents an amazing opportunity for students to explore contemporary topics with an eye toward critical discernment of sources, and the agendas and motives behind them. This course will actively explore complex issues in our contemporary society through the prism of history. Topics include: globalism and nationalism, bias in media, the Culture War, economic trends of the modern world, and major social issues and their change over time. In order to become better-informed citizens, students will practice evaluating various sources of media and bias. This will be accomplished in a variety of ways including socratic seminar, project-based learning, and facilitated debates and oral presentations. This course is a semester class.

MATHEMATICS ELECTIVES

Financial Literacy - Grade 10

Course #: 2250

Level: CP

Credits: 2

Financial Literacy is essential in meeting the financial challenges of the 21st century, with understanding and managing personal finances the key to one’s future financial success. Based on the Massachusetts Mathematics Curriculum Framework (2017) learning standards, this course teaches students to apply the knowledge and skills to various financial situations they will encounter later in life to make critical decisions regarding personal finances. Students will learn money management, savings and investing, income, and spending strategies. This course will teach students to identify and prioritize their personal money management goals, develop personal spending, savings, and investing plans, tax implications and understand the cost of using credit along with asset protection. This is a semester class.

Introduction to Computer Science - Grade 11

Course #: 2341

Level: CP

Credits: 4

This new math elective will introduce students to the basics of computer programming. Students will learn using Python, a relatively new and widely used programming language both in industry and academia. The concepts learned with Python are easily transferable to other popular languages such as C++ and Java. Students will use the concepts they learn to create their own programs to solve complex problems or increase the speed and efficiency of tasks performed on a computer. Topics to be covered will include basics of programming, conditional statements, loops, vectors, strings, cells, and a cursory overview of object oriented programming. The class will be largely project based, where students are given a problem or task that they need to create a program to solve.

Accounting - Grade 12

Course #: 2460

Level: CP

Credits: 2

Accounting is an applied mathematics course where students learn about the operational principles necessary for success in the workplace. Topics include basic accounting procedures, debits and credits, customer needs assessment, investment activities, analyzing, evaluating, and creating financial reports, and technology applications for operating systems and budgets. Building upon these topics, students will conduct a financial analysis of a real-world business organization. This is a semester class.

SCIENCE ELECTIVES

Sustainability Science - Grade 11

Course #: 3350

Level: CP

Credits: 4

This lab-based course focuses on the application of science through the lens of sustainability to better understand the interrelationship between humans and their impact on the planet. After examining energy in the Earth, the structure and composition of the atmosphere, circulation of the oceans and atmosphere, and climate variations over time, students will learn about sustainable practices that are best suited to help promote a better ecological balance. Students will conduct research, analyze case studies, participate in several hands-on labs, and develop a problem-solving project using the scientific method.

Forensic Science - Grades 12

Course #: 3440

Level: CP

Credits: 4

This is a lab-based elective designed to give students an in-depth look at the world of forensics. Students will be introduced to the basic application of science to the law. Students will learn how forensic scientists combine today's technology with the skills of the scientific community in order to help solve crimes. Topics covered include crime scene evaluation, fingerprinting, and DNA analysis; and the examination of current cases as they relate to these topics.

SPANISH ELECTIVES

Spanish II - Grade 10

Course #: 6200, 6201

Level: ACP, CP

Credits: 4

Spanish II continues and solidifies the introduction to the Spanish language and culture with more extended vocabulary and grammar concepts. Students will continue to practice reading, writing, listening, and speaking in Spanish. Students learn how to conjugate stem-changing verbs in the present tense, as well as both types of past-tense verbs. **Please note that this elective is an intensive, hybrid semester offering and will combine 45 blocks of direct classroom instruction with 45 online Spanish-learning modules through our e-textbook. Students opting to take this course will be required to complete online assignments during both their Academic and CTE cycles.** This is a semester class. Spanish I is a prerequisite.

Spanish I - Grade 11

Course #: 6301, 6300

Level: ACP, CP

Credits: 4

Spanish I begins a two-year introduction to the Spanish language and culture with an emphasis on building a foundation in the language. Students will practice reading, writing, listening, and speaking in Spanish. Students will learn a variety of vocabulary words across many topics, basic grammar concepts such as present-tense verbs, forming sentences, and the use of gender in the language. Projects completed will be creative menus, written reports, and oral presentations. **Please note that this elective is an intensive, hybrid semester offering and will combine 45 blocks of direct classroom instruction with 45 online Spanish-learning modules through our e-textbook. Students opting to take this course will be required to complete online assignments during both their Academic and CTE cycles.** This is a semester class. This class will not be offered in the 2021-22 school year and beyond.

Spanish II - Grade 12

Course #: 6401, 6400

Level: ACP, CP

Credits: 4

Spanish II continues and solidifies the introduction to the Spanish language and culture with more extended vocabulary and grammar concepts. Students will continue to practice reading, writing, listening, and speaking in Spanish. Students learn how to conjugate stem-changing verbs in the present tense, as well as both types of past-tense verbs. **Please note that this elective is an intensive, hybrid semester offering and will combine 45 blocks of direct classroom instruction with 45 online Spanish-learning modules through our e-textbook. Students opting to take this course will be required to complete online assignments during both their Academic and CTE cycles.** This is a semester class. Spanish I is a prerequisite. This class will not be offered in the 2022-23 school year and beyond.

ADDITIONAL COURSES

Curriculum Seminar - Grade 9, 10, 11, 12

Course #: 7100i, 77200i, 7300i, 7400i

Level: CP

Credits: 4

Curriculum Seminar is designed to support the academic learning and organizational needs of students seeking additional support to complete their academic coursework at Essex North Shore Agricultural & Technical School. In addition to providing students with focused in-school time to continue working on their academic coursework assignments, the Academic Seminar classroom also provides explicit instruction in organizational strategies and ongoing support to help students successfully complete their academic work. With that in mind, the daily classroom protocols must (a) maximize instructional time, (b) create a supportive, predictable environment, and (c) foster self-regulating learning skills.

Academic Seminar 11, 12

Course #: 7311, 7411

Level: CP

Credits: 4

The Academic Seminar is designed to support the academic learning and organizational needs of students seeking additional support to complete their academic coursework at Essex North Shore Agricultural & Technical School. In addition to providing students with focused in-school time to continue working on their academic coursework assignments, the Academic Seminar classroom also provides explicit instruction in organizational strategies and ongoing support to help students successfully complete their academic work. With that in mind, the daily classroom protocols must (a) maximize instructional time, (b) create a supportive, predictable environment, and (c) foster self-regulating learning skills. Students taking Academic Seminar courses are required to sign and return this [Academic Seminar Student & Parent/Guardian Contract](#)

Mathematics Skills Seminar - Grade 9, 10

Course #: 8110, 8220

Level: CP

Credits: 4

This course acts as an intervention designed to support freshmen and sophomores who may struggle with number sense and mathematical problem solving skills. The course will focus instruction on effective strategies such as using mathematical equations that will inform problem solving. Students take part in pre- and post-assessment of their mathematics level as a part of this course.

Reading Skills Seminar - Grade 9, 10

Course #: 8100, 8200

Level: CP

Credits: 4

This course acts as an intervention designed to support freshmen and sophomores who may struggle with reading in the content areas due to below average reading skills. The course will focus identifying text structures and will aid in comprehension of content-area reading. Students take part in pre- and post-assessment of their reading level.

Math & Science Seminar - Grade 11

Course #: 7301

Level: CP

Credits: 4

This course is intended to provide ongoing support for juniors who still need to meet the passing level of the MCAS Mathematics and/or end-of-course MCAS Biology tests to meet their Competency Determination. Students take a diagnostic assessment to identify areas of focus and instruction is customized to meet the needs of every learner in this small-group classroom seminar.

WELLNESS COURSES

Wellness - Grade 9

Course #: 5100

Level: CP

Credits: 4

Freshmen will be enrolled in a semester of Physical Education and a semester of Health Education. Wellness courses take place during the CTE Week. During Physical Education, students will learn how to safely use the equipment in the fitness center, participate in cooperative activities, and utilize the adventure course to teach appropriate risk taking and team building. During Health Education, students will learn and understand the leading causes of death in the U.S. and how their lifestyle choices can help prevent them. They will become aware of the signs and symptoms of the most commonly diagnosed mental illness. Students will also be exposed to the proper nutritional guidelines around food preparation, serving sizes, food labels, and counting calories. In addition, students will learn about how to manage their time better to reduce stress.

Wellness - Grade 10

Course #: 5200

Level: CP

Credits: 2

Sophomores will be enrolled in Physical Education and Health Education. Wellness courses take place during the CTE Week. During Health Education, students will talk about the many risks youth face today, including drug/alcohol abuse, violence, and sexual transmitted diseases. One of the goals of this course is to help teens understand the causes of drug/alcohol abuse and to prevent its onset. The Human Sexuality unit will present factual information and encourages students to apply the information when making responsible decisions. Other topics that will be discussed include: anatomy, physiology, sexual responsibility, danger of teenage pregnancy, contraception, and sexually transmitted diseases. During Physical Education, students will continue to learn how to safely use the equipment in the fitness center, participate in cooperative activities, and utilize the adventure course to teach appropriate risk taking and team building.

Wellness - Grade 11

Course #: 5300

Level: CP

Credits: 2

Juniors will be enrolled in Physical Education and Health Education. Wellness courses take place during the CTE Week. During Health Education, students will learn and explore more complex aspects of nutrition. Students will have an opportunity to understand the essential components of nutrition and their personal needs based on their current health, activity level and future goals. Focus will also be spent on developing healthy relationships, while learning about effective communication and understanding and respecting differences. Lastly, an in depth look at the components of physical fitness will be explored. Students will understand these components and learn about the various types of exercises that can be done to increase their overall physical fitness. During Physical Education, students will have the opportunity to design personal workout routines, participate in cooperative activities, and utilize the adventure course. Personal workout routines are designed daily by students using a workout template sheet and may consist of favorite exercise routines or exercises they have been exposed to previously in the fitness center. Cooperative activities consist of net games, invasion games, and team building activities.

Wellness - Grade 12**Course #: 5400****Level: CP****Credits: 2**

Seniors will be enrolled in Physical Education and Health Education. Wellness courses take place during the CTE Week. During Physical Education, students will have the opportunity to design personal workout routines, participate in cooperative activities, and utilize the adventure course. Students must commit to either choice for an entire cycle. Personal workout routines are designed daily by students using a workout template sheet and may consist of favorite exercise routines or exercises they have been exposed to previously in the fitness center. Cooperative activities consist of net games, invasion games, and team building activities. During Health Education, students will learn about First Aid/CPR education. Students will understand how to perform CPR correctly and in what situations it would be used. Students will also gain knowledge in First Aid and how to perform various fundamental treatments on others when needed. Another focus of this course will be to provide students with an understanding of the responsibilities of parenthood and different factors they will encounter in their lives. This unit will go into how those specific factors will influence an individual as well as the entire family's ability to raise a child and how their components of wellness are affected differently. The last aspect of this course will cover a community based service learning project where students will take an active role as a class to help out around the community or to create a fundraising event for good causes around the area.

STUDENT SUPPORT SERVICES

SCHOOL COUNSELING SERVICES

The Essex North Shore Agricultural & Technical School Guidance faculty provides comprehensive, school-based services to all students with the goal of nurturing skills for students' success during high school and beyond. Freshman students are assigned to a Grade 9 freshman counselor who assists them with their transition to a regional, career technical high school. The Grade 9 counselor also works closely with Grade 9 students to assess their career interests in preparation for participation in the Grade 9 Exploratory Program and the ensuing career technical program placement. These freshman counselors continue to work with students throughout their ninth grade experience. Beginning in Grade 10 to Grade 12, students are assigned to a CTE program-specific Guidance Counselor.

At all grade levels, students participate in developmental academic and career guidance lessons delivered by guidance counselors throughout each year and students graduate having developed a Four-Year Career Plan with the support of their guidance counselors. Students and their families may access information in their respective student's Career Plan and explore career and college opportunities on their student's *Naviance Student* account (*link below*).

All students have access to supportive interventions from guidance counselors and school adjustment counselors to address their developmental, social, and emotional needs. Collaboration with caregivers is also an essential component of our guidance model. Caregivers are encouraged to contact their student's counselor as circumstances arise. Appointments with guidance and school adjustment counselors are welcome and can be scheduled by emailing or calling the counselor directly.

In addition to providing regular parent/family support on an individual basis, the Essex North Shore Agricultural & Technical School Guidance Department also sponsors the following parent information sessions annually:

- New Student Parent Orientation
- College Fair
- Senior Parent College & Career Planning Night
- College Financial Aid Night (hosted by MEFA)
- FAFSA on the Spot Session
- Freshmen CTE Program Selection Parent Info Night
- Sophomore & Junior Post Secondary Planning Parent Night

HEALTH SERVICES

The Essex North Shore Agricultural & Technical School Health Office is staffed by two full time School Nurses (RN's). The School Nurses promote health and safety and facilitate the success and well-being for all members of the ENSATS school community by intervening with actual and potential health problems and by building student and family capacity for adaptation, self-management, self-advocacy and lifelong learning as it relates to wellness. Specifically, our School Nurses address/implement:

- First aid for injuries and initial care for illness for students and staff
- Assessment of students health, growth and development

- Detection, treatment, and follow-up on health issues interfering with student learning
- Referrals to parent or physician as necessary
- Student medication administration
- State-Mandated Health Screenings
- Coordinate receipt and review of physical exams and immunization records
- Responsible for communicable disease reporting and control.

For students with specific health care needs due to chronic or emergent needs or conditions, including those whose Individual Education Programs or 504 Accommodation Plans document health related needs and services, the School Nurses may be identified as a school based service provider. In doing so, ENSATS School Nurses are frequently in communication with family contacts, health care providers and community resources as necessary and appropriate.

The School Nurses are also available to facilitate health education, social welfare referrals, health insurance referrals and/or dental referrals. They guide and develop school and district health policies, nutritional guidance and encourage staff wellness. Our School Nurses also share responsibility for crisis intervention and education and are active participants in awareness training and response to crises teams.

EDUCATIONAL STABILITY

EDUCATIONAL OPPORTUNITIES FOR HOMELESS CHILDREN & YOUTH

The McKinney-Vento Homeless Assistance Act and the Elementary and Secondary Education Act (ESEA), as amended by the Every Student Succeeds Act (ESSA) of 2015, ensure educational rights and protections for children and youth experiencing homelessness. The Massachusetts Department of Elementary and Secondary Education has adopted Section 725(2) of this Act regarding the definition of homeless children and youth to include: *Individuals who lack a fixed, regular, and adequate nighttime residence or have a primary nighttime residence in a supervised, publicly or privately, operated shelter for temporary accommodations (including welfare hotels, congregate shelters, and transitional housing for the mentally ill), an institution providing temporary residence for individuals intended to be institutionalized, or a public or private place not designated for, or ordinarily used as, a regular sleeping accommodation for human beings. This definition shall include: children and youth who are sharing the housing of other persons due to loss of housing, economic hardship, or a similar reason; are living in motels, hotels, trailer parks, or camping grounds due to the lack of alternative adequate accommodations; are living in emergency or transitional shelters; are abandoned in hospitals; children and youth who have a primary nighttime residence that is a public or private place not designed for or ordinarily used as a regular sleeping accommodation for human beings; children and youth who are living in cars, parks, public spaces, abandoned buildings, substandard housing, bus or train stations, or similar settings; migratory children (as such term is defined in section 1309 of the Elementary and Secondary Education Act of 1965) who qualify as homeless because they are living in circumstances described above; and unaccompanied youth a youth not in the physical custody of a parent or guardian.*

EDUCATIONAL OPPORTUNITIES FOR CHILDREN IN FOSTER CARE

The Essex North Shore Agricultural and Technical School District (ENSATSD hereafter) and Essex North Shore Agricultural and Technical School (ENSATS hereafter) are committed to ensuring continued enrollment, attendance, and the opportunity to succeed in school for youth engaged in the foster care system consistent with ESSA (2015) excerpts related to Title 1 Part A foster care enrollment provisions. The purpose of this policy is

to ensure the educational stability of students in foster care and their equal access to the same free and appropriate public education through high school graduation as provided to other students as required by law. Educational stability has a lasting impact on students' academic achievement and wellbeing. ENSATSD is committed to supporting school and community efforts to ensure that students in foster care have access to high-quality, stable educational experiences.

EDUCATIONAL OPPORTUNITIES FOR MILITARY CHILDREN

The Essex North Shore Agricultural and Technical School District (ENSATSD hereafter) and Essex North Shore Agricultural and Technical School (ENSATS hereafter) are committed to ensuring continued enrollment, attendance, and the opportunity to succeed in school for students experiencing housing or living transitions due to a family member's military status or connection as it is appropriate and necessary to remove barriers to educational success imposed on children of military families because of their parents'/guardians' frequent moves and deployment. In an effort to facilitate the placement, enrollment, graduation, data collection and provision of special services for students transferring into or out of the District because of their parents'/guardians being on active duty in the U.S. Armed Services, ENSATSD supports and will implement its responsibilities as outlined in the [Interstate Compact on Educational Opportunity for Military Children](#).

To view these policies in their entirety, visit: EssexNorthShore.org/district/. For additional information on these district policies, or to refer a student for support and intervention consistent with these district policies contact the ENSATSD District Homeless Education Liaison and/or Foster Care Point of Contact.

STUDENT ACTIVITIES

Participation in extracurricular clubs and student government can be a rewarding and meaningful educational experience that enhances a child's secondary education. It is important that students realize the time demands, responsibility, dedication and sacrifices required when making this kind of commitment. The following information defines the extra-curricular policies and procedures for all students participating in our High School activities. Please refer to the Student Activities Handbook for a better understanding of our philosophy, goals, and policies, or when a question about your child's extra-curricular experience arises.

FFA

FFA is an intra-curricular student organization for those interested in agriculture and leadership. It is one of the three components of agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA develops members' potential and helps them discover their talent through hands-on experiences. FFA members can compete in Career Development Events (CDE) that cover job skills.

SKILLSUSA

SkillsUSA is a partnership of students, teachers, and industry working together to ensure America has a skilled workforce. We provide educational programs, events, and competitions that support career and technical education (CTE) in the nation's classrooms. SkillsUSA's mission is to empower its members to become world-class workers, leaders and responsible American citizens. SkillsUSA improves the quality of America's skilled workforce through a structured program of citizenship, leadership, employability, technical and professional skills training.

ART CLUB

Students are encouraged to come to this club to explore their creative talents and enjoy some DIY projects, art appreciation and have fun!

CHESS CLUB

Chess club is open to students of ALL experience levels. If you have ever wanted to learn how to play chess or you want to challenge another player, come join us! This is an informal gathering of chess enthusiasts (or want -to-be enthusiasts).

CHORUS

Chorus and Advanced Chorus offer students an opportunity to sing acapella and contemporary choral pieces. Chorus meets on Thursdays until 4:00, and Advanced Chorus meets on Thursdays until 5:45. The Chorus season runs from September – December. Singers will work towards a December concert. All levels of singers welcome!

COMMUNITY SERVICE-KEY CLUB

Key Club is a service leadership organization for high school students who love to help in their communities and get involved.

CULTURAL AWARENESS COLLECTIVE (CAC)

The Cultural Awareness Collective at Essex North Shore Agricultural and Technical School has as its mission to educate our school community to respect the differences within our culture, and that our similarities far outweigh our differences. Our goal is to create an atmosphere where all who enter our school community feel comfortable being a part of our school.

DECA

DECA (Distributive Education Clubs of America) Club is an intra-curricular organization that prepares emerging leaders and entrepreneurs as they pursue careers in business management and administration, entrepreneurship, finance, hospitality and tourism, marketing, and personal financial literacy. Students compete with other DECA members in state and national competitions. Student leadership, social endeavors, and philanthropic activities are the focus of this program.

DRAMA CLUB

Drama Club promotes creativity, community, and an opportunity for students to be involved in all aspects of production – from acting to stagecraft. The year will include a fall play, a winter entry into the Massachusetts Educational Theater Guild's High School Festival, and a spring musical.

ENVIRONMENTAL ACTION CLUB

Activities include recycling, trail maintenance, setting up bat or bird boxes, composting, outdoor recreation, beach cleanup and volunteer work with other organizations.

EQUESTRIAN CLUB DRILL TEAM

An equestrian drill team is a group of horses and riders performing choreographed maneuvers to music.

GOAT CLUB

Learn more about goats! Activities include completing an agility course, maintaining their coats and nails, and providing environmental enrichment.

GSA

Gay Straight Alliance (GSA), also known as Essex North Shore Agricultural & Technical School Awareness Group (ETAG), is a forum of support for every sort of diversity, including but not limited to gender and sexual orientation issues, religious issues, and racial issues. GSA is a group of thoughtful and caring Essex North Shore Agricultural & Technical School citizens who are excited to belong to a school where diversity is not only accepted but encouraged. GSA sponsors social activities as well as forums for the education of the school community about the importance of tolerance and diversity.

HORROR LITERATURE CLUB

Horror Literature Club is for students who are interested in reading and writing horror stories. Participants will examine classic and contemporary horror stories and novels from Edgar Allan Poe to Stephen King. Participants will learn about the development of the horror genre by focusing on the six elements of effective horror.

LITERARY MAGAZINE (The Hawk and the Quill)

The purpose of the “Magazine” is to provide the experience of writing, evaluating, and publishing creative works—paintings, line art, photography, graphic art, stories, poetry, and personal narratives—by students. All students are welcome to participate—contributions will be accepted throughout the year, focused on two publications—Winter and Spring, depending on interest and contribution.

LIVESTOCK SHOWING-CATTLE CLUB

This club is for students who want to learn to show cattle in fitting and showmanship competitions. Students will choose a school cow to work with and train to show in local cattle shows, such as the Topsfield Fair.

MATH TEAM

If you love math and a challenge, Math Team is for you! Members collaborate to solve puzzles, brain teasers, and challenging math problems in the areas of Algebra 1, Geometry, Algebra 2, and Related Tech. We are always coming up with new ways to think "outside the box!" All grade levels and math backgrounds are welcome.

MODEL UNITED NATIONS

Model United Nations (or UN) is a club for students interested in sharing views on global issues, diplomacy, and current events, along with those looking to improve their negotiation and public speaking skills. Student delegates attend Model UN conferences at colleges and high schools in the area during the school year. At these conferences, members act as diplomats from various nations and negotiate solutions to pressing problems facing our world today.

MUSIC CLUB

Music club invites any student who has a passion for music to bring and play instruments, sing or just appreciate the bands and music they love with like-minded peers. This will be an informal gathering for music lovers; voluntary performances are a possibility if students are interested, but no musical ability is required to attend.

NATIONAL HONOR SOCIETY & NATIONAL TECHNICAL HONOR SOCIETY

Celebrating outstanding educational achievement and advancement in career and technical education. Open to juniors and seniors with a cumulative grade point average of 3.5 who demonstrate leadership, service, and good character. This is an application process through invitation.

POLITICAL ACTION CLUB

ETPAC (Essex North Shore Agricultural & Technical School Political Action Club) is a forum for allowing students to explore politics and have civil discourse on issues relating to federal, state, and local government.

SCIENCE TEAM

The Essex North Shore Agricultural & Technical School Science Team participates in the North Shore Science League. In the North Shore Science League, schools compete against each other in events involving building, invention, engineering, lab techniques, and application of knowledge. All areas of science are included in events during the year. Students travel to seven meets over the course of the year.

SNAPSHOT PHOTOGRAPHY CLUB

Snapshot Photography club welcomes any student who wants to learn more about photography, use high-quality cameras, edit photos in Photoshop, or simply just have fun snapping cool shots. This club offers complete creative freedom since students will choose their own projects and can work in groups or individually.

STUDENT MENTORS

The Student Mentors are a select group of upperclass students who are committed to helping our freshmen transition to Essex North Shore Agricultural & Technical School. These students help at orientation and make connections with freshmen throughout their first year as Essex North Shore Agricultural & Technical School students.

WEIGHTLIFTING CLUB

Physical fitness plays an essential role in longevity, health and character building. The education that can be attained in this club will not only help students stay fit and healthy, but they will also learn the significance and fundamentals of dedication, loyalty, and setting goals.

YEARBOOK

Come and make some lasting memories while creating and organizing the School Yearbook. Yearbook is open to all students to work on a student-designed yearbook that covers the whole school and school year. If you are creative, like to take photos and create some cool pages – we'd love to have you.

VIDEO GAME CLUB

Video Game Club is the place to go to play and discuss games. Video Game Club is dedicated to not only working on cooperation and teamwork through exciting games but also about having fun and working on social

skills with the other players. Games and consoles may vary, but some of the games that are often brought in include Mario Kart 8, Super Smash Bros, and Kirby Star Allies. Video Game Club and their adviser believe in equality and friendliness.

ATHLETICS

At Essex North Shore Agricultural & Technical School, athletics are considered an integral part of the educational experience. Athletics provides opportunities which will help students develop physically, mentally and emotionally. Participation in athletics is viewed as a healthy, educational and psychological activity. It challenges each student to excel, discover their physical limits, and requires students to work cooperatively as members of a team. While competition and winning are natural goals in the pursuit of excellence, the principles of good sportsmanship and competition take precedence at all times and enhance the educational value of contests. For more information contact the ENSATS Athletic Director or visit <http://ma.8to18.com/essextech/>.

FALL SPORTS

- Cheerleading (Varsity, JV)
- Cross Country (Varsity)
- Field Hockey - (Varsity, JV) – Coop with Georgetown host school
- Football (Varsity, JV, Freshman)
- Golf (Varsity)
- Soccer - Boys (Varsity, JV)
- Soccer - Girls (Varsity, JV)
- Volleyball - Girls (Varsity, JV, Freshmen)

WINTER SPORTS

- Basketball - Boys (Varsity, JV, Freshman)
- Basketball - Girls (Varsity, JV, Freshman)
- Cheering (Varsity)
- Gymnastics - Coed (Varsity)
- Ice Hockey – Boys (Varsity, JV)
- Ice Hockey – girls (Varsity, JV) – Coop with Bishop Fenwick host school
- Indoor Track and Field – Boys & Girls (Varsity, JV)
- Swimming/Diving – Boys & Girls (Varsity, JV) – Coop with Peabody host school
- Wrestling – (Varsity)

SPRING SPORTS

- Baseball (Varsity, JV, Freshman)
- Lacrosse - Boys (Varsity, JV)
- Lacrosse - Girls (Varsity, JV)
- Track and Field - Boys & Girls (Varsity, JV)
- Softball (Varsity, JV, Freshman)
- Volleyball – Boys (Varsity, JV)
- Tennis - Boys (pending coop with Peabody High School)
- Tennis - Girls (pending coop with Peabody High School)

APPENDIX

Post-Secondary Planning

Post-Secondary Statistics for the Class of 2019:

| | | | |
|--|-------|----------|-------|
| 4 year College, University | 63.4% | Career | 16.8% |
| 2 year College, University or Post Secondary Education | 19.0% | Military | .08% |

STANDARDIZED ASSESSMENT INFORMATION FOR COLLEGE ADMISSIONS

There are many preparation tests and general information regarding scoring and statistics found on this website.

SAT information and registration can be found at www.collegeboard.org.

ACT information and registration can be found at www.act.org.

ACCUPLACER information can be found at www.accuplacer.collegeboard.org.

DUAL ENROLLMENT Commonwealth Dual Enrollment Partnership (CDEP)

The **Commonwealth Dual Enrollment Partnership (CDEP)** provides opportunities for Massachusetts high school students to take college-level courses at a discounted price that may be used toward their future college degrees. College courses will be factored into a student's grade point average at Essex North Shore Agricultural & Technical School at a weight consistent with the AP course weighting.

CDEP eases the transition from high school to college, allows students to get a head start on their college careers and provides meaningful and challenging academic experiences to qualified students who otherwise may not have access to an early college experience. The ultimate goal of CDEP is to increase the population of high school graduates who are college ready. Student participation in CDEP is at the discretion of the participating institution of higher education, subject to capacity constraints and state appropriation.

ARTICULATION AGREEMENTS

Articulation agreements are formal agreements or partnerships between Essex North Shore Agricultural & Technical School and participating colleges or post-secondary educational institutions (Community College, Technical Program or 4 year college) documenting transfer policies that define a pathway from an academic or technical program in one place to the other. Eligible students may access course articulations to not only ensure that the courses they complete while in high school will not have to be repeated at the post secondary institution which they are attending but also to earn advanced college credit when applicable.

ESSEX TECH AFTER DARK PROGRAM

Juniors and Seniors participating in the After Dark Program at Essex Tech attend their local high schools for academic courses in the morning and receive technical training in the afternoon in the career technical area of their choice. Programs are featured below.

Advanced Manufacturing provides training and work experience across a broad spectrum of manufacturing equipment. Students learn how to manufacture and inspect parts out of metals and other various materials using manual and CNC lathes, milling machines and grinders. Students learn to design components on Computer Aided Design (CAD) software for parts used for complex machinery for all industries, including locally; aerospace, medical, semiconductor and area research, and development that require precision design, manufacturing, and assembly using principles of engineering.



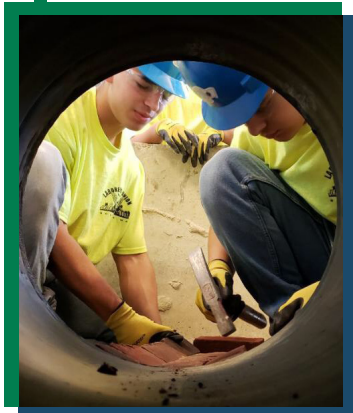
Automotive Collision Repair and Refinishing provides hands-on experience working on a wide range of vehicles. Students learn techniques to repair vehicles with collision or cosmetic damage. Students gain experience in all areas, including welding, metal straightening, frame repair, refinishing, plastic repair, computerized paint-mixing, mechanical, system repairs, electrical repairs, and damage estimating for insurance requirements.

Students in **Sustainable Horticulture** gain knowledge and experience needed to manage fruit, vegetable, and greenhouse production systems. A broad understanding of botany, Integrated Pest Management, plant propagation, nutrition, production, and soil science are important. Students will also learn to create marketable floral designs, grow and maintain seasonal foliage and flowering plants, and acquire the entrepreneurial skills that will make them more marketable in the ever-changing career landscape.



ESSEX NORTH SHORE
AGRICULTURAL & TECHNICAL SCHOOL

ESSEX TECH AFTER DARK PROGRAM



The **Construction Craft Laborers** program prepares students for careers in the construction and building trades. The construction industry is one of the most diverse industries. From highway or building construction, environmental restoration, tunnel, and shaft construction and demolition projects to training and knowledge of craft skills and handling of hazardous materials, students gain a broad knowledge of the industry. The construction industry remains a major growth industry and a source of job opportunities for individuals entering the workforce.

In **Design and Media Communications**, artistic and technical skills are developed

through the creation and presentation of graphic and multimedia projects. Students will become versed in principles of design such as color theory, composition, and illustration. Students will learn the basics of page layout and design, typography, digital photography, video production, storyboarding, web design and communication with a client. They learn to take an idea from concept to preflight and understand the principles of prepress and outsourcing, as well as the practical aspects of the printing processes, silk screening, and various bindery equipment. Students design and produce communication products using the latest Adobe Creative Cloud software and Macintosh computer hardware, outputting files to a wide format printer, digital copier, vinyl cutter or silk screen. Integral to the program is a student-run design and copy center that trains students in customer service and business-related procedures.



For more information please email:
Maryanne Gearin, M. Ed, CTE Expansion Liaison
at mgearin@essextech.net

Essex North Shore Agricultural & Technical School
565 Maple Street
Hathorne, MA 01937
Main Office: (978) 304-4700





CREATE

ENCOURAGE

DEVELOP



PROMOTE



The mission of Essex North Shore Agricultural & Technical School is to **create** a culture of academic and technical excellence, **encourage** continuous intellectual growth, and **promote** professionalism, determination, and citizenship for all students, as they **develop** into architects, artisans, and authors of the 21st-century community.



ESSEX NORTH SHORE
AGRICULTURAL & TECHNICAL SCHOOL

