NORTHEAST METRO TECH PROGRAM OF STUDIES

2023-2024



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## Mission Statement

Believing that all students are capable of learning, Northeast Metropolitan Regional Vocational School through the integration of the efforts of its communities, parents, administration, faculty, students and staff is committed to supplying to its students a rigorous academic and career/technical education in an open, diverse, and supportive environment.

## Philosophy

We support the development of students who will strive to attain job skills beyond the entry level, become life-long learners, and succeed in both their career and educational pursuits after graduation. We encourage all students to share in the responsibility of their education and the consequences of their actions while enjoying the rewards of their efforts.

Our communities have diverse social, cultural, economic, and educational backgrounds. Our student body reflects this diversity. We respect and welcome this diversity and the human differences that make our school, community, and country a place of individual freedom and equal opportunity for advancement.

Our communities also provide a wide range of employment opportunities in the business, technical, service, construction, manufacturing, and health occupations. We are committed to providing students with the opportunity to acquire the career/technical and academic skills needed for productive employment in these areas and actively pursue the involvement of employers in our educational programs.

We bring education beyond the classroom walls and into the community. By establishing in our students a pattern of community involvement, we seek to enhance each student's personal growth and instill the importance of the individual's contribution to the community, country, and world.

The Northeast Metropolitan Regional Vocational School District strives to provide a safe, respectful, and supportive learning environment in which all students can thrive and succeed in its school. The Northeast Metropolitan Regional Vocational School District prohibits discrimination on the basis of disability, race, color, sex, gender identity, religion, national origin, sexual orientation, or homelessness and ensures that all students have equal rights of access and equal enjoyment of the opportunities, advantages, privileges, and course of study.

Section 504 Coordinator<br>Title IX Coordinator<br>Tracey O'Brien, Assistant Superintendent tobrien@northeastmetrotech.com<br>781248-0810<br>Tracey O'Brien, Assistant Superintendent tobrien@northeastmetrotech.com<br>781248-0810

## Northeast is committed to:

- Create a community of learners in a safe and positive environment.

Prepare students for productive employment and /or continuing education.
Develop student pride in themselves, their family, school, work, community, and country.

Provide a practical application of knowledge for optimum achievement through the integration of academic, career and technical education.

Promote professional development for members of the staff to encourage exemplary teaching and motivated learning.

Advance career/technical programs that offer students meaningful related experiences through state-of-the-art technology and cooperative education.

- Provide a comprehensive academic program that focuses on the Massachusetts Frameworks and allows every student to advance according to his/her ability.

Advocate student participation in community service projects and co-curricular activities.

Counsel students on appropriate career choices and options based on their capabilities and employability skills that meet the needs of business and industry.

Continue to strengthen the partnership between the school and the community.
Provide the experiences needed to develop students with the career/technical, academic, social, cultural and civic skills needed to be productive citizens in today's global community.

# NORTHEAST METRO TECH HIGH SCHOOL 100 HEMLOCK ROAD 

WAKEFIELD, MA 01880

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Mr. David DiBarri, Superintendent

Ms. Tracey O'Brien, Asst. Superintendent
Dr. Carla Scuzzarella, Principal

## 2023-2024 SCHOOL PROFILE


#### Abstract

Northeast Metro Tech High School is a four year vocational high school. The Northeast Metropolitan Regional Vocational School District is comprised of twelve communities that send to our school students of diverse social, cultural, economic, and educational backgrounds. We understand this diversity and strive to provide vocational, academic, physical, social, ethical, moral, and emotional development through our programs.


The school program operates on trimesters with a rotating block schedule that alternates between academic and vocational studies weekly. Total enrollment is approximately 1250 students. After a Vocational Exploratory Program in Grade 9, students select from sixteen vocational areas and begin a three year vocational program in Grade 10 that results in the attainment of a Certificate of Vocational Proficiency along with a High School Diploma. All students must meet State of Massachusetts academic standards to earn a High School Diploma from Northeast Metro Tech High School. Advanced Placement, Honors and College Placement classes are offered in major academic areas. Rank in class is computed for all students at the end of the junior year using weighted grades. Final rank is determined at the end of the senior year on the same basis.

ADMINISTRATIVE FACULTY
Jack O'Brien
Victoria Colaianni Joe Papagani
Russ Mezikofsky Jarrod Richards James Picone

Assistant Principal
Administrator of Special Education
Academic Program Coordinator
Vocational Dean
Vocational Dean
Finance Director

GUIDANCE DEPARTMENT

| Rosemary Ruiz | Department Head |
| :--- | :--- |
| Dina Baratta | Adjustment Counselor |
| Patrice Buccieri | Adjustment Counselor |
| Diane Celona | Adjustment Counselor |
| Maira Mejia | Bi-lingual Counselor |
| Carly McCarthy | Adjustment Counselor |
| Krista Buck | Adjustment Counselor |
| Jaime Toomey-Ritterhaus | Social/Emotional Counselor |
| Dawon Dicks | Diversity Coordinator |
| Helen Rouse | Career Counselor |

## Student Post Graduate Plans:

| Four Year Public College | $14.1 \%$ | CEEB / ACT CODE NUMBER: 222171 |
| :--- | :--- | :--- |
| Two Year Public College | $08.3 \%$ | Accredited by New England Association of Schools <br> Colleges |
| Four Year Private College | $16.0 \%$ |  |
| Two Year Private College | $00.3 \%$ |  |
| Other Post-Secondary | $01.3 \%$ |  |
| Apprenticeship | $00.6 \%$ |  |
| Employment | $38.8 \%$ |  |
| Military | $00.6 \%$ |  |
| Other (family, travel) | $00.3 \%$ |  |
| Unknown | $19.6 \%$ |  |

## General Information

## Admissions

Applications are due March $1^{\text {st }}$ to the Northeast Admissions Office. The Admissions Policy may be found on page 81.For more information or an online application visit:
http://www.northeastmetrotech.com/admissions/

## Academic Programs

English Language Arts
English Language Learner Education
Mathematics/Computer Science
Science
Social Sciences/History
World Language
Wellness

## Career Technical Programs

Automotive Collision Repair \& Refinishing
Automotive Technology
Business Technology
Carpentry
Cosmetology
Culinary Arts
Dental Assistant
Design \& Visual Communications
Drafting \& Design
Early Childhood Education
Electricity
Health Assistant
Heating, Ventilation \& Air Conditioning
Metal Fabrication
Plumbing \& Pipefitting
Robotics \& Automation
Grade 9 Vocational Exploratory Programs
Related Vocational Technical Studies

## Extra-Curricular Program

Interscholastic Athletics: Baseball, Basketball, Cheerleading, Cross Country, Field Hockey, Football, Golf, Hockey, Lacrosse, Soccer, Softball, Swimming, Tennis, Indoor/Outdoor Track \& Field, Volleyball, and Wrestling

Activities: Student Government, Skills USA, National Honor Society, National Vocational Technical Honor Society, Tech Prep, SADD, Equality Club, Peer Mentoring, Mediation \& Support Programs, Chorus Club, Drama Club, DECA

Career Development/Career Center Career Development at Northeast assists students in transitioning into the school, exploring career opportunities and developing career plans for high school and beyond. It is a school-wide goal that all students transition out of Northeast on a clearly defined career path. The Career Center is the focal area for a well-planned four year career development program that prepares all Northeast students for their individually chosen career paths.

The following stages are critical parts of Northeast's career development program:

> SELF-ASSESSMENT
> CAREER EXPLORATION
> DEVELOPING A CAREER GOAL MARKETING STUDENT SKILLS

## Cooperative Education Program

The Cooperative Education Program is both a school-based and work-based program. Co-op students will continue to receive their academic instruction in a traditional classroom setting. However, during students' shop weeks, eligible students may be employed by an area business. Eligible students will perform work that is both suited to their qualifications and is aligned with the State competencies for their grade in their career technical area. Co-op students must meet Northeast's prerequisites before entering the program.

## STEM Innovation Lab (Science, Technology, Engineering, Math)

Northeast's S.T.E.M. program has been designed by our talented faculty members who come from diverse engineering experiences and backgrounds. The team's goal is to offer select senior students an applied science focused experience utilizing raw materials and new technologies. The students will learn about the many interesting disciplines of science, engineering, and mathematics while participating in engaging hands-on activities. For example, students will learn about the global GPS network in the science classroom, then students will take that learning "into the field" and participate in a high tech scavenger hunt in the adjacent Breakheart Reservation. The goal is to provide experiences that will help to develop an intellectual understanding of these core subjects while preparing students for opportunities for future study and work. This new understanding will challenge STEM students to utilize higher order thinking skills for future careers and college programs. STEM ACADEMY students will actively participate in STEM related field trips and will be offered the following courses:

GR 11 Science Elective: Honors/CP Digital Manufacturing
GR 12 Science Elective: Honors Introduction to Engineering Design
GR 12 STEM VOCATIONAL PROGRAM: ONE DAY PER CAREER TECH WEEK -A WEEK

## Tech Prep

The Tech Prep program is a coordinated effort by Northeast, local community colleges, technical colleges, other post-secondary institutions, unions, local business and industry. Tech Prep is an educational plan, structured according to the student's specific career goals, that rewards students for excellent achievement in their high school courses with work credits or college credits/advanced standing. For further information, including but not limited to Northeast's articulation agreements, visit:
www.northeastmetrotech.com/guidance/career-planning/articulation-agreements.html www.northeastmetrotech.com/guidance/career-planning/career-pathways.html

## Graduation Requirements

Northeast Metro Tech operates a on trimester, 57 minute six block schedule that provides academic instruction and vocational instruction. The rotation continues throughout the school year. The school day begins at 7:45 AM and ends at 2:30 PM. It is the school's philosophy that well-rounded individuals who are ready to become responsible and contributing members of society must be prepared in academic, as well as technical areas.

Northeast Metro Tech graduates must accumulate a minimum of 276 credits out of a possible 288 credits. The distribution of required credits is as follows:

| 4 years of English | 24 Credits |
| :--- | :--- |
| 4 years of Mathematics | 24 Credits |
| 3 years of Science | 18 Credits |
| 3 years of Social Studies (passing US 10 \& 11 req.) | 18 Credits |
| 1 year of Vocational Exploratory (Grade 9)* | 30 Credits |
| Vocational Shop (Grade 9) | 6 Credits |
| 3 years of Vocational Related Theory | 18 Credits |
| 3 years of Vocational Shop | 102 Credits |
| Physical Education/Health | 8 Credits |
| World Language and Other Electives <br> *Each of the fifteen Freshman Exploratory is assigned 2.0 credits. | 40 Credits |

## Minimum Promotion Criteria

- Students at Northeast receive a numerical grade for all academic subjects each marking period. The passing grade is 65 . No student will be eligible for summer school with a failing grade below 50.
- $\quad$ Students will not be promoted to the next grade if they are deficient twelve (12) credits at the time of entry to a new school year.
- Students in grades 10 and 11 must pass their vocational shop and vocational related class to be promoted to the next grade.
- Successful completion of a Senior project is a requirement for Graduation.
- $\quad$ Seniors must be enrolled in 6 classes each trimester, regardless of how many credits they have earned prior.
- All students must fulfill the MCAS examination requirements in the areas of English, Math, and Science in accordance with federal and state standards as a prerequisite for receipt of a Northeast Metro Tech High School Diploma.
- Courses completed in Summer School (SS) or through a Credit Recovery (CR) Program will be indicated as such on transcripts.
- All medically excused grades not completed by the end of the school year will be converted to zeros.


## Advanced Placement (AP) Program at Northeast

Advanced Placement (AP) classes are courses that meet a prescribed syllabus developed by the College Board. These courses represent college level study and prepare students to take an examination each May. The goal of Northeast's AP Program is to prepare students for post-secondary education by honing their analytical skills and advancing in-depth knowledge in their coursework. Northeast offers the following AP courses:

Biology
Calculus AB
Computer Science Principles
Computer Science A
English Language \& Composition
English Literature \& Composition
United States History
Physics
Psychology
Statistics

## Grade Point Average (GPA)

What is GPA?
Grade Point Average (GPA) is the manner in which high schools and many post-secondary educational institutions numerically represent academic performance on a student's transcript. Northeast uses the table below, plus a formula for including the Vocational program grades.

Why should you care about GPA?
If you are thinking of continuing your education after high school, you will be required to have a certain GPA to be considered as an applicant at many post-secondary institutions.

GPA Scale (Weighted by course level)

| Percentile | College Prep <br> Courses | Honors <br> Courses | AP |
| :---: | :---: | :---: | :---: |
| $97-100$ | 4.3 | 4.8 | 5.3 |
| $93-96$ | 4.0 | 4.5 | 5.0 |
| $90-92$ | 3.7 | 4.2 | 4.7 |
| $87-89$ | 3.3 | 3.8 | 4.3 |
| $83-86$ | 3.0 | 3.5 | 4.0 |
| $80-82$ | 2.3 | 3.2 | 3.7 |
| $77-79$ | 2.0 | 2.8 | 3.0 |
| $73-76$ | 1.7 | 2.2 | 2.7 |
| $70-72$ |  | 2.3 |  |


| $67-69$ | 1.3 | 1.8 | 2.3 |
| :---: | :---: | :---: | :---: |
| $65-66$ | 1.0 | 1.5 | 2.0 |
| 64 and <br> Below | .4 | .9 | 1.4 |

## Class Rank

Class rank is determined by a student's grade point average. The determination of the Valedictorian and the Salutatorian will be made at the end of the second ( $\left.2^{\text {nd }}\right)$ trimester, senior year.

The official GPA and Class Rank are calculated at the end of the Junior year.

## Grading Policy

It is the philosophy of Northeast Metro Tech High School that students respond more positively to the opportunity for success than to the threat of failure. We seek, therefore, through our academic and vocational programs to make achievement both recognizable and possible for our students. We emphasize achievement in our process of evaluating student performance. We report achievement through the use of numerical grades. The primary purpose of grading is to report to students and their parents the extent to which the student has mastered the content of a course as defined by the course objectives. Grades also serve to promote a process for continuous evaluation of student performance and provide a basis for bringing about changes in student performance if such change is necessary.

Course expectations for each academic and vocational course shall be provided to every student within one week of the beginning of a course in order to inform both the students and the parents of each teacher's expectations and the responsibilities of the student relative to successful completion of the course. Teachers will take time to explain to students the course objectives, the expectations for student performance and responsibilities, and the evaluation system the teacher will use to determine to which extent the student has achieved the course objectives. The teacher shall make clear to the students at appropriate intervals and the parents as necessary, the basis upon which the grades are earned.

Grades are based on evidence of the attainment of the instructional objectives of the course. The extent to which the student has attained the objectives shall be determined by his/her performance on assessment measures developed, administered and corrected by the teacher. The minimum passing grade for all courses at Northeast is a $\mathbf{6 5}$.

## Course Selection

Northeast Metro Tech High School runs a trimester schedule. In the required academic subject areas it is EXPECTED that students complete all three trimesters. Most ELECTIVE classes are single trimester courses.

College Preparatory courses are open to all students and may include a wide range of abilities and interests. Departments also offer courses that are designated as Honors or Advanced Placement (AP). ALL courses should hold high expectations for students as well as provide students with opportunities to think critically and broadly about subject matter.

Courses designated as Honors are characterized by an accelerated pace, assumed mastery of all of the concepts and skills from prior courses, ability to investigate, analyze, synthesize, evaluate and solve unfamiliar problems with minimal guidance. Honors courses demand extensive work outside of class. Courses designated as Advanced Placement (AP) are college-level courses that follow a national curriculum established by the College Board. AP courses also demand substantial independent work, extensive use of supplementary materials and primary source documents, sophisticated analysis and synthesis of ideas and information, and often have summer/vacation work.

## Course Changes

Course changes are disruptive to the continuity of a student's educational program. For this reason, the course-selection process conducted each spring is done so with great care and with input from
teachers and guidance counselors. Students will have an opportunity to meet individually with his/her guidance counselor to select courses for the next school year.

Should extraordinary circumstances warrant a change in a student's schedule, the following criteria must be met prior to course changes:

Course change requests will only be considered for students requiring a change in the level of their course (moving up or down in the level of their course placement).

- Course changes will not be made due to student/parent request for specific teachers.

Course changes will only be implemented at the end of the grading period.

- The student must have stayed after-school for a minimum of two extra help sessions with the teacher and completed all homework assignments.
- The course change requested has been reviewed and signed by the teacher and the guidance counselor and approved by the administration.


## Special Education Services

In accordance with Chapter 766 of the Massachusetts General Laws and the Federal Law, IDEA, Northeast Metro Tech High School's Special Education program provides services for students who have a documented educational disability, are unable to progress effectively within the regular education program, and are in need of special education services. Special Education staff work closely with students, teachers, and parents to monitor student progress and to modify and support the regular academic/vocational program to meet student needs.

Services provided include academic support, study skills instruction, testing, assessment and evaluation of a student's learning strengths and weaknesses, and direct instruction when appropriate. When possible, Special Education teachers team with classroom teachers to provide appropriate instruction in regular classes for students with special educational needs.

Each student's individual educational plan is reviewed annually, on o or before the anniversary date of its implementation to determine student progress. Any parent or staff member may make a 766 referral for a special education evaluation after all appropriate regular education options as planned by the Student Assistance Team (SAT) have been implemented.

Accommodation Plans (504)

## Northeast Metropolitan Regional

## Vocational District



# Section 504 of the Rehabilitation Act of 1973 

# A Guide for Families and Students 

## Section 504 Coordinator

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## Section 504 of the Rehabilitation Act of 1973

Section 504 of the Rehabilitation Act of 1973 (Section 504) is a federal statute that prohibits discrimination based upon a disability. Section 504 ensures that eligible disabled students receive opportunities and benefits and have equal access to facilities in the same manner as their nondisabled peers. School districts must provide an appropriate education for each disabled student with reasonable accommodations that allow access to the benefits of public education.

Students who are protected under Section 504 must be determined to:

- Have a physical or mental impairment that substantially limits one or more major life activity;
- Have a record of such an impairment; or
- Be regarded as having an impairment

The determination of whether a student has a physical or mental impairment that substantially limits a major life activity (and therefore has a disability) must be made on a case by case basis.

## Eligibility Criteria

Eligibility under Section 504 is determined using a 3-pronged approach that considers if the student:
(1) Has a physical or mental impairment ...
(2) That substantially limits ...
(3) A major life activity.

Eligibility for under Section 504 will be determined by a Team of people with knowledge about the student. In order to be considered disabled under Section 504, all three prongs need to accurately reflect the student within the school setting.

## Physical or Mental Impairment

Section 504 defines a physical or mental impairment as any

- physiological disorder or condition,
- cosmetic disfigurement, or
- anatomical loss affecting one or more of the following body systems: neurological, musculoskeletal, special sense organs, respiratory, including speech organs, cardiovascular, reproductive, digestive, genito-urinary, hemic and lymphatic, skin and endocrine.

The Section 504 definition of physical and mental impairment also includes any mental or psychological disorder.

## Major Life Activities

Major life activities include certain acts a person does (such as hearing, speaking, lifting) and a person's bodily functions (such as lung disease that affects a person's respiratory system or a traumatic brain injury that affects the function of the brain).

Under Section 504, the list of major life activities includes, but is not limited to, the following:
$\bullet$ caring for oneself • performing manual tasks • seeing • hearing • eating • sleeping • walking $\bullet$ standing $\bullet$ lifting $\bullet$ speaking $\bullet$ breathing $\bullet$ learning $\bullet$ reading $\bullet$ concentrating - thinking $\bullet$ communicating $\bullet$ working $\bullet$ bending

Major bodily functions are also major life activities under the law, and these major bodily functions include functions of the bowel, bladder and brain; normal cell growth, and the immune, endocrine, respiratory, reproductive, circulatory, digestive and neurological systems.

When an impairment does not substantially limit one or more of the above major life activities, a student does not qualify for classroom accommodations under Section 504. It is important for families and school personnel to have conversations about instructional strategies that are utilized routinely for all students and that meet the needs of diverse learners.

Information from the Office for Civil Rights, based upon the 2008 amendments to the Americans with Disabilities Act (ADA), clarifies that a temporary impairment does not constitute a disability except under certain conditions. Along with the conditions as discussed in the 3-prong eligibility process, the expected duration of the impairment needs to be considered. Through the amendment of ADA, Congress determined that the duration of an impairment expected to last less than 6 months does not constitute a disability.

When considering eligibility under Section 504, it is important to note the following:

1) A 504 Plan is not designed to fundamentally alter the program, standards, or what students are expected to know and be able to do.
2) A 504 Plan is meant to give students equal access to their program; it is not designed to equalize outcomes or provide advantage

## The Eligibility Determination Process

The 504 Coordinator will be responsible to implement the eligibility process. The Coordinator will determine a Team for each student based upon the nature of the suspected disability and the presenting questions regarding the student's needs. A 504 Eligibility Team consists of people who:

- Have knowledge about the student
- Have knowledge about the evaluation data and information
- Have knowledge about accommodations that may be discussed


## Step 1. Referral

When parent/guardian or school staff suspect a student may have a disability, a written referral must be presented to the 504 Coordinator or designee (school counselor).

## Step 2. Evaluation and Documentation

Evaluations will be proposed after school personnel review the referral information. With prior parent consent, Northeast Metro Tech will conduct an evaluation that will include school district assessments and review of other relevant information, e.g. grades, review of records, health information, and classroom participation and performance. The evaluation process may include formal testing conducted by highly credentialed school personnel. Evaluations conducted by school personnel will be administered during the school day and may result in the student missing some instructional time.

Should the school district determine that formal evaluations are needed, consent from parents will be required. Upon receipt of parent consent to conduct the evaluation, the school district has 45 school days to complete the evaluations and hold a 504 Eligibility Meeting.

There are times when families may present to the school district a report from an independent evaluator. Although the Team will consider the findings from independent educational evaluations, Northeast Metro Tech reserves the right to conduct our own evaluations.

As part of the eligibility determination process, Northeast Metro Tech may provide parents/guardians with a release of confidential information form to allow school personnel to speak with outside providers and to share relevant information about the student.

Should the family wish to present information from outside sources, the following checklist will help ensure that all appropriate information is available for the 504 Eligibility Team to review at least 2 school days prior to the eligibility meeting.
$\qquad$ Statement regarding the nature of the suspected disability
$\qquad$ Independent evaluation reports that are current (within one year)
$\qquad$ Professional credentials of the evaluators must be presented
$\qquad$ Relevant educational, developmental and medical history
$\qquad$ Description of how the suspected disability substantially limits the student's ability to learn and/or access his/her school environment (for high school age students, a statement from the student is suggested)

Step 3. Team Review to Determine Eligibility The 504 Eligibility Team will schedule a meeting to determine eligibility for a Section 504 Accommodation Plan. All provided assessment reports and information from the variety of sources will be considered by the entire Team. The 3-pronged eligibility criteria will guide the process to determine a student has a disability under Section 504 . The Team will be conscious that an impairment may not meet the threshold of a disability under the federal eligibility guidelines as mentioned above.

Questions that the Team will consider at the meeting will include:

1. What is the nature and severity of the impairment?
2. What is the suspected duration of the impairment?
3. How has the student responded to any prior interventions?
4. Does the student consistently need extended time to complete assignments?
5. Does the student consistently need significant changes made to the curriculum and/or physical school environment?
6. Does the student demonstrate consistent behavior difficulties?

Should the 504 Eligibility Team determine a student is eligible for a Section 504 Accommodation Plan, the Team will develop the plan collaboratively. Accommodations included in the Section 504 Plan will:

1. Be individualized for the student.
2. Be considered as necessary.
3. Be determined by the Team.
4. Not be developed to provide advantage.
5. Not fundamentally alter the program, standards, or what students are supposed to know and be able to do. T

The Plan will be signed by parents and/or student (age 18 or older) and implemented immediately. All teachers and other school personnel with a "need to know" status will be informed of the accommodations included in the Plan.

Should the Team find the student not eligible for a Section 504 Plan, the Team will encourage the student and family to discuss with the teachers the differentiated instructional approaches that are implemented routinely within the classroom and that may be helpful to the student. (District Curriculum Accommodation Plan - DCAP)

## Standardized Tests and Accommodations

## MCAS

MCAS is untimed for every student; each student receives as much time as s/he needs within one school day. Other MCAS accommodations will be considered for eligible students on a case by case basis and must be in accordance with the Department of Elementary and Secondary Education Requirements for the Participation of Students with Disabilities in MCAS.

## The College Board \& ACT - High School Students

If a student has a Section 504 Plan, they may be eligible for accommodations from the College Board or ACT through their Services for Students with Disabilities. Students wishing to receive accommodations on College Board exams (PSAT, SAT, SAT II, AP) or the ACT must apply and be approved for accommodations by the respective testing agencies. Students interested in applying for accommodations through the College Board must first complete the Consent Form for Request for Accommodations. This form is located in the Guidance Office. ACT applications for accommodations are also located in the Guidance Office.

Please Note: Among other criteria, the College Board and ACT ask the following questions when determining eligibility:

- Does the student have a documented disability? Does the documentation support the specific ways in which this disability impacts the student's daily functioning and ability to participate in the test?
- Does the student frequently request and use the accommodations during his/her school day?
- Has the student been on a 504 Plan for at least four school months?

According to the College Board rules and regulations:

## "Note that the use of accommodations in school, or inclusion on an Individual Education Program (IEP) or 504 Plan, does not qualify a student for accommodations on College Board tests."

College Board Resources Eligibility and Review:
https://accommodations.collegeboard.org/how-accommodations-work/who-is-eligible
Documentation Requirements:
https://accommodations.collegeboard.org/how-accommodations-work/who-is-eligible/ca n-you-document-disability

Basic Requirements for Disability Documentation:
https://accommodations.collegeboard.org/how-accommodations-work/who-is-eligible/ca n-you-document-disability

Notice of Parent and Student Rights Under Section 504
504 Parent Rights

## SAMPLE COURSE CHANGE REQUEST

Date of Request: $\qquad$ Initiated By: $\qquad$

Student Name: $\qquad$ ID\#: $\qquad$ Grade: $\qquad$ HR/Shop: $\qquad$

Counselor: $\qquad$

Course Change: From: $\qquad$ Level: $\qquad$

To: $\qquad$ Level: $\qquad$

Current teacher comments/recommendations:
$\qquad$
$\qquad$
$\qquad$

Teacher signature: $\qquad$ Date: $\qquad$

Counselor comments/recommendations: (Impact on Other Courses or Graduation Requirements) *Please see reverse side for college entrance requirements*
$\qquad$
$\qquad$
$\qquad$
Counselor signature: $\qquad$ Date: $\qquad$

NOTES TO PARENTS/GUARDIANS: Prior to course changes being considered, the following must be met:

1. Student must attend class regularly.
2. Student must come to class prepared (notebook, pencil, book, homework, etc.)
3. Student must actively participate in class activities.
4. Student must make up all work missed due to absences.
5. Student must return after school for extra help with the teacher at least three times. (Each teacher has a $2: 30 \mathrm{pm}-3: 30 \mathrm{pm}$ extra help session one afternoon per week)
$\qquad$ I do not wish to have my student's course changed at this time.
$\qquad$ I approve my student's course change.

Parent/Guardian signature: $\qquad$ Date: $\qquad$

## COURSE CHANGE APPROVED COURSE CHANGED NOT APPROVED

Admin for Student Services signature: $\qquad$ Date: $\qquad$

## Preparing for the Future

The Guidance Department assists students and their parents with plans for the future. Counselors provide information on high school graduation requirements and on general college admission requirements. The counselors will assist the students in formulating a list of colleges to which they will apply, and write recommendations for students upon request. Counselors send transcripts upon request and receipt of appropriate fees. In addition, they will provide information on tests such as the Scholastic Aptitude Test (SAT) and the American College Test (ACT). The counselors host a College Night and a FAFSA/MEFA (Financial Planning for College) Workshop for parents and students during each school year.

## Types of Schools and Colleges

There are many types of institutions for students and parents to consider. They may be classified as follows:

1. Degree-granting institutions offering curricula generally requiring four school years to complete
2. Junior colleges, community colleges and technical institutes offering programs of two years duration
3. A large class of schools, giving vocational courses from six weeks to several years in length

## College Requirements

The requirements for admission to colleges vary so greatly in detail that it is impossible to set down guidelines that may be trusted to qualify a candidate for all colleges. However, generalizations may be made.

Schools and colleges usually require a candidate be prepared in seventeen units of work. A unit as presented to a college from Northeast Metro Tech High School consists of 7.5 credits of work in a subject for which study outside of class is required. For example, 7.5 credits (full year) of English is one unit. For subjects that meet less frequently throughout the year, a fraction of credit is allowed. The grades required in the seventeen units vary among the schools and colleges.

The 17 Units are courses usually required for consideration for admission to a four-year college/university (see table on next page).

## Massachusetts State University System and UMass

## Minimum Admissions Requirements

The admissions standards for the state universities and UMass emphasize a strong academic high school background so that the students enter college ready to learn. These standards represent minimum requirements; meeting them does not guarantee admission, since campus officials consider a wide range of factors in admissions decisions. Students shall have fulfilled all requirements for the high school diploma or its equivalent upon enrollment. It is important to note that admissions standards for the state's colleges differ. Community colleges may admit any high school graduate or GED recipient.

## Freshman Applicants

The new admissions standards for freshmen applicants have two main parts:

1. 17 required academic courses.

## ACADEMIC COURSE REQUIREMENTS

Seventeen college preparatory courses distributed as follows are required. (A course is equivalent to one full school year of study. Courses count toward the distribution only if passed.)

English

Mathematics

Sciences
Social Sciences
Foreign Language
2 courses (in a single language i.e. Spanish I \& II)
Electives
4 courses

4 courses (Algebra I \& II, Geometry or Trigonometry)

3 courses (including 2 courses with laboratory work)
3 courses (including U.S. History 10 \& 11)

2 Courses
(Arts \& Humanities, Computer Sciences, or the above subjects)
2. A minimum required grade point average (GPA) earned in college preparatory courses completed at the time of application. A 3.0 is the GPA that must be achieved.
3. Applicants must submit an SAT or ACT score.
a. SAT SCORES
i. Applicants who meet the GPA requirement do not have to use the sliding scale for admission, but still must submit SAT or ACT test scores for consideration if they are applying to a state university or UMass within three years of high school graduation.

## Sliding Scale

If an applicant's GPA falls below the required minimum, a sliding scale will apply. This scale should be used only when an applicant's GPA falls below the required 3.0 minimum for admission to the state universities or UMass.

SLIDING SCALE FOR FRESHMAN APPLICANTS TO UMASS

Weighted H.S. GPA
Combined SAT-I Verbal \& Math
Must Equal or Exceed (ACT in Italics)
2.51-2.99 950
2.41-2.50
2.31-2.40
2.21-2.30
2.11-2.20
2.00-2.10

1070
(20)
(21)

1030 (22)

1110

1150
(25)

SLIDING SCALE FOR FRESHMAN APPLICANTS TO A STATE COLLEGE

| Weighted H.S. GPA | Combined SAT-I Verbal \& Math |
| :--- | :--- |
|  | Must Equal or Exceed (ACT in Italics) |

### 2.51-2.99 920

2.41-2.50
2.31-2.40
2.21-2.30
2.11-2.20
2.00-2.10

960 1000

1040
1080
1120
(20)
(22)

No applicant with a high school GPA below 2.00 may be admitted to a State University or UMass

## Exception Allowances

English as a Second Language (ESL) applicants must complete the 17 required college preparatory courses with two exceptions:

1. ESL applicants may substitute up to two college preparatory electives for the two required foreign language courses and,
2. ESL applicants may substitute up to two years of college preparatory ESL English courses for college preparatory English courses.

Learning Disabled Applicants: Applicants with professionally diagnosed and documented learning disabilities (documentation must include diagnostic test results) are exempt from taking standardized tests for admission to any public institution of higher education in the Commonwealth. Such students, however, must complete $17^{* *}$ required academic courses with a minimum required GPA of 3.00 or present other evidence of the potential for academic success.
**An applicant may substitute two college preparatory electives for the two required foreign language courses only if the applicant has on file with the high school results of a psycho-educational evaluation completed within the past three years that provides a specific diagnosis of a learning disability and an inability to succeed in a foreign language. Eligibility for admission is not an entitlement of admission for any applicant, including learning disabled students.

Vocational-Technical Students must complete 17 college preparatory courses, distributed in the same manner and with the same minimum grade point averages required of other high school graduates, with the following exceptions:

- Two vocational-technical courses may be used to fulfill the two required electives;
- Vocational-technical high school graduates who do not complete the two required college preparatory foreign language courses must complete an additional elective college preparatory course, for a total of three such courses, and satisfy one of the following options:
- Complete at least one Carnegie unit of foreign language;
- Complete a fourth Carnegie unit of mathematics or science, which need not be a laboratory course; or
- Complete one Carnegie unit of computer science

COURSE AND CREDIT OPTIONS BY GRADE

| GRADE 9 |  |
| :--- | :--- |
| COURSE | CREDITS |
| English (including lab) | 8.0 |
| Mathematics (including lab) | 8.0 |
| Science (including lab) | 8.0 |
| World History | 6.0 |
| Digital Literacy | 2.0 |
| Health | 2.0 |
| Physical Ed | 2.0 |
| Vocational Exploratory | 6.0 |
| Vocational Shop (Apr-June) | 72 |
| Total: |  |
|  | CREDITS |
| GRADE 10 |  |
| COURSE |  |



|  |  |
| :---: | :---: |
| COURSE | CREDITS |
| English | 6.0 |
| Mathematics | 6.0 |
| US History 11 | 6.0 |
| Science or Elective | 6.0 |
| Electives | 4.0 |
| Physical Ed | 2.0 |
| Related Theory | 6.0 |
| Vocational Shop | 36.0 |
| Total: | 72 |
| GRADE 12 |  |
| COURSE | CREDITS |
| English | 6.0 |
| Mathematics | 6.0 |


| Science or Elective | 6.0 |
| :--- | :---: |
| Social Studies or Elective | 6.0 |
| Electives | 10.0 |
| Physical Ed | 2.0 |
| Related Theory | 6.0 |
| Vocational Shop | 36.0 |
|  | $\mathbf{7 2}$ |

## Academic Program

## English Language Arts

The English Language Arts program at Northeast Metro Tech High School is geared to promote the development and increase the range of skills necessary in the area of communication with regard to writing, reading, listening and speaking. It is designed so that all students will achieve competency in the areas of discussion and presentation, vocabulary development, standard written English and composition, and reading comprehension. Through the curriculum, students are exposed to the many genres of literature - American, British, and World - prior to graduation. Students are required to demonstrate facility and competency in writing in the persuasive, narrative, descriptive, creative, and explanatory modes. Students must also demonstrate their ability to write critically about literature. The writing process is incorporated into all courses offered by the department.
$1111 \quad$ Honors English $9 \quad 6.0$ credits
1111-Lab Honors English 9 Lab 2.0 credits

The focus of instruction in English 9 is on enhancing skills in the areas of: reading comprehension, vocabulary, grammar and conventions and study habits/meeting deadlines. The Grade 9 theme addresses a "A Child's-Eye View" including topics such as exploring the ways of the world, expanding horizons, analyzing the structure of family, and the concepts of trust, betrayal, and mortality. The literature program includes novels, plays, short stories, essays and poetry supplemented by appropriate audio-visual materials. The composition component stresses adherence to a " 5 paragraph" model where a strong thesis/topic is developed, supporting details are discovered, examined and effectively organized, and a logical conclusion is presented. Research writing (including but not limited to documentation and plagiarism) will also be covered.

Students in this course will be supported to exercise serious reflection, demonstrate creativity, work independently and effectively manage time. Readings and assignments will include an emphasis on MCAS preparation throughout the course. Honors courses move at a faster pace than College Prep courses and will include additional assignments.

Prerequisite: Placement testing

| 1121 | CP English 9 | 6.0 credits |
| :--- | :--- | :--- |
| $1121-L a b$ | CP English 9 Lab | 2.0 credits |

The focus of instruction in English 9 is on enhancing skills in the areas of: reading comprehension, vocabulary, grammar and conventions and study habits/meeting deadlines. The Grade 9 theme addresses a "A Child's-Eye View" including topics such as exploring the ways of the world, expanding horizons, analyzing the structure of family, and the concepts of trust, betrayal, and mortality. The literature program includes novels, plays, short stories, essays and poetry supplemented by appropriate audio-visual materials. The composition component stresses adherence to a " 5 paragraph" model where a strong thesis/topic is developed,
supporting details are discovered, examined and effectively organized, and a logical conclusion is presented. Research writing (including but not limited to documentation and plagiarism) will also be covered.
Students in this course will be expected to develop more independent work habits and should anticipate taking responsibility for actively participating in class, asking clarifying questions, efficiently recording critical information, and completing assignments in a timely manner. MCAS preparation will be emphasized throughout the course.
Prerequisite: Placement testing

## 1211 Honors English 10 <br> 1211-Lab Honors English 10 Lab

## 6.0 credits

2.0 credits

The Grade 10 curriculum revolves around the theme of "Ins and Outs"; discovering how/where one
might fit in a society, dealing with expectations of others, building dreams, watching dreams crumble and then rebuilding, discovering support networks, learning to integrate and balance elements of the Id/Ego/Superego. The focus of instruction in English 10 is on enhancing skills in the areas of reading comprehension, vocabulary, grammar and conventions and study habits/meeting deadlines. The literature program includes novels, plays, short stories, essays, and poetry, supplemented by appropriate audio-visual materials. The composition component stresses adherence to a " 5 paragraph" model where a strong thesis/topic is developed, supporting details are discovered, examined, and effectively organized, and a logical conclusion is presented. Research writing assignments will be given.

Students in this course will be supported to exercise serious reflection, demonstrate creativity, work independently and effectively manage time. Honors courses move at a faster pace than College Prep courses and will include additional assignments. MCAS preparation will be emphasized throughout the course.

Prerequisite: Grade of 80 or better in English 9 (CP or H) and/or teacher recommendation

1221
1221-Lab CP English 10 Lab

## 6.0 credits

2.0 credits

The Grade 10 curriculum revolves around the theme of "Ins and Outs"; discovering how/where one might fit in a society, dealing with expectations of others, building dreams, watching dreams crumble and then rebuilding, discovering support networks, learning to integrate and balance elements of the Id/Ego/Superego. The focus of instruction in English 10 is on enhancing skills in
the areas of reading comprehension, vocabulary, grammar and conventions and study habits/meeting deadlines. The literature program includes novels, plays, short stories, essays, and poetry, supplemented by appropriate audio-visual materials. The composition component stresses adherence to a " 5 paragraph" model where a strong thesis/topic is developed, supporting details are discovered, examined, and effectively organized, and a logical conclusion is presented. Research writing assignments will be given.

Students in this course will be supported to exercise serious reflection, demonstrate creativity, work independently and effectively manage time. MCAS preparation will be emphasized throughout the course.

Prerequisite: Successful completion of English 9

## $1302 \quad$ Advanced Placement English Language \& Comp 6.0 credits

This college level course for Juniors focuses upon the areas of reading, literary analysis, writing, grammar/usage, oral communication and research, so that students can work through the curriculum at a faster pace and at a greater level of sophistication than at the College Prep or Honors levels. The course engages students in becoming skilled readers of prose written in a variety of periods, disciplines, and rhetorical contexts, and in becoming skilled writers who compose for a variety of purposes. Students will write in various forms - narrative, expository, and argumentative - on many different subjects from person experiences to public policies, from imaginative literature to popular culture. Students will also be expected to read both primary and secondary sources, to synthesize material from these texts in their own compositions, and to cite source material using conventions recommended by professional organizations such as the Modern Language Association. The primary goal of the course is "to enable students to read complex texts with understanding and to write prose of sufficient richness and complexity to communicate effectively with mature readers." (College Board) Summer work is required for all students choosing this course.

Prerequisite: Grade of 80 or better in English 9 and 10 Honors, and teacher recommendation or permission of the instructor.

$$
\begin{array}{lll}
1312 & \text { Honors English } 11 & 6.0 \\
\text { credits } & &
\end{array}
$$

During Grade 11 students will explore "Dystopia;" analyzing worlds coming apart, devising survival/coping skills, developing id/ego/superego (complete personality), as well as balancing the needs of the individual vs. the needs of society and analyzing law versus power \& influence. The focus of instruction in English 11 is on enhancing skills in the areas of reading comprehension, vocabulary, grammar and conventions and study habits/meeting deadlines. The literature program includes novels, plays, short stories, essays, and poetry, supplemented
by appropriate audio-visual materials. The composition component stresses adherence to a " 5 paragraph" model where a strong thesis/topic is developed, supporting details are discovered, examined, and effectively organized, and a logical conclusion is presented. Research writing assignments will be given. SAT/Accuplacer preparation will be emphasized throughout the course.

Students taking this course will be supported to exercise serious reflection, demonstrate creativity, work independently, and effectively manage time. Honors courses move at a faster pace than College Prep courses and will include additional assignments.

Prerequisite: Grade of 80 or better in English $10(\mathrm{CP}$ or H) and/or teacher recommendation.

$$
\begin{aligned}
& 1322 \\
& \text { credits }
\end{aligned} \quad \text { CP English } 11
$$

During Grade 11 students will explore "Dystopia"; analyzing worlds coming apart, devising survival/coping skills, developing id/ego/superego (complete personality), as well as balancing the needs of the individual vs. the needs of society and analyzing law versus power \& influence. The focus of instruction in English 11 is on enhancing skills in the areas of reading comprehension, vocabulary, grammar and conventions and study habits/meeting deadlines. The literature program includes novels, plays, short stories, essays, and poetry, supplemented by appropriate audio-visual materials. The composition component stresses adherence to a " 5 paragraph" model where a strong thesis/topic is developed, supporting details are discovered, examined, and effectively organized, and a logical conclusion is presented. Research writing assignments will be given. SAT/Accuplacer preparation will be emphasized throughout the course.

Students will be expected to develop more independent work habits and should anticipate taking more responsibility for actively participating in class, asking clarifying questions, efficiently recording critical information, and completing assignments in a timely manner.

Prerequisite: Successful completion of English 10
1402 Advanced Placement English Literature \& Comp. 6.0 credits

This college level course seeks to engage students in careful reading and critical analysis of literary texts. Students will have an intensive study of representative works from both British and American authors in several genres from the sixteenth century to contemporary times. Throughout the year students are expected to continue to develop their knowledge of literary terms related to prose and poetry; demonstrate how the parts and techniques of a literary work contribute to the meaning of the work; actively participate in high level analytical discourse; and create cogent, sustained and sophisticated expressions of analytical interpretation in written form. Summer work is required for all students choosing this course.

Prerequisite: Grade of 80 or better in English 11 Honors, and teacher recommendation or permission of instructor

## 1412

Honors English 12
6.0 credits
"Heroism" is the Grade 12 theme. Curriculum and instruction will support students in identifying and analyzing topics of resilience, self-reliance, independence, establishing a voice, participation in life and society, and learning how to distinguish between "just causes" vs. "lost causes." The focus of instruction in English 12 is on enhancing skills in the areas of reading comprehension, vocabulary, grammar and conventions and study habits/meeting deadlines. The literature program includes novels, plays, short stories, essays, and poetry, supplemented by appropriate audio-visual materials. The composition component stresses adherence to a " 5 paragraph" model where a strong thesis/topic is developed, supporting details are discovered, examined, and effectively organized, and a logical conclusion is presented. Research writing assignments will be given. SAT/Accuplacer preparation will be emphasized throughout the course.

Honors level students will be supported to exercise serious reflection, demonstrate creativity, work
independently, and effectively manage time.

Prerequisite: Grade of 80 or better in English 11 (CP or H) and/or teacher recommendation

## 1422

"Heroism" is the Grade 12 theme. Curriculum and instruction will support students in identifying and analyzing topics of resilience, self-reliance, independence, establishing a voice, participation in life and society, and learning how to distinguish between "just causes" vs. "lost causes." The focus of instruction in English 12 is on enhancing skills in the areas of reading comprehension, vocabulary, grammar and conventions and study habits/meeting deadlines. The literature program includes novels, plays, short stories, essays, and poetry, supplemented by appropriate audio-visual materials. The composition component stresses adherence to a " 5
paragraph" model where a strong thesis/topic is developed, supporting details are discovered, examined, and effectively organized, and a logical conclusion is presented. Research writing assignments will be given. SAT/Accuplacer preparation will be emphasized throughout the course. Students will be expected to develop more independent work habits and should anticipate taking more responsibility for actively participating in class, asking clarifying questions, efficiently recording critical information, and completing assignments in a timely manner.

Prerequisite: Successful completion of English 11

| Electives <br> 1739 | Honors Sixties Literature (Grades $11 \& 12$ ) | 2.0 |
| :--- | :--- | :--- |
| credits <br> 1738 <br> credits | CP Sixties Literature (Grades $11 \& 12$ ) | 2.0 |

Students will utilize fiction and nonfiction texts, journalism, documentaries, film, poetry and music to understand the various movements that occurred within the generations. Students will further explore the social impacts of the events by reading from one or more of the following related texts: America Dreaming: How Youth Changed America in the 60's, Hearts in Atlantis, Countdown. Students may contract for Honors level work and credit.

| 1760 | Honors Creative Writing (Grades $11 \& 12$ ) | 2.0 credits |
| :--- | :--- | :--- |
| 1761 | CP Creative Writing (Grades $11 \& 12$ ) | 2.0 credits |

This course will provide students with the opportunity to develop their own creative writing. Throughout the Trimester, students will explore various genres of creative writing. Creative writing also develops students' editing abilities in workshop and small group sessions. The course will begin with a study of creative writing techniques and will incorporate short exercises and activities designed to enhance creativity. Students will keep their own writing journals, read and study models of creative literature, and learn to think about literature as writers do. They will write character sketches, short stories, poetry and if time permits dramatic scenes. Students may contract for Honors level work and credit.
$1762 \quad$ Honors Young Adult Literature I (Grades 11 \& 12) 2.0 credits

This elective course is designed for students who enjoy reading and desire an opportunity to strengthen their skills in comprehension and literary analysis. Students will study a variety of young adult texts and genres as vehicles for deepening understanding of character development, theme, symbolism, conflict, irony, setting, style, and point of view. Students will complete in-class activities along with independent reading and shop-week assignments. We may also study film adaptations of some young adult novels to further our study of genre and reinforce students' ability to compare and contrast. Students will also be introduced to literary criticism. Young Adult Literature (YAL) is designed to reinforce what students are learning in their other English classes through contemporary and popular young adult novels which are interesting and relevant to high school students. Students may contract for Honors level work and credit.

Whether it is idle small talk, a formal address, or a raging debate, verbal communication is essential to the world around us. This class will examine the ways we communicate. Students will study public speaking and be required to write and deliver different types of speeches informative, evocative and persuasive as a few examples. Students will also work on developing arguments while "on their feet." Students will leave the class feeling more comfortable and confident with public forms of expression. Students may contract for Honors level work and credit.

1766
1767
Honors Literature to Film (Grades 11 \& 12)
CP Literature to Film (Grades 11 \& 12)

## 2.0 credits

2.0 credits

The class is designed to show students how film is a form of literature. By viewing modern American films, students will learn that good film, like good literature, has certain elements in common. Students will be expected to understand motifs, symbols, metaphors, allusions, plot, theme, and other literary elements as they relate to both film and literature. In addition, students will develop an appreciation for the interaction of film elements such as scripting, directing, acting, producing, lighting, sound, music, editing, cinematography, special effects, set design and costuming. Students will learn to recognize such film genres as drama, comedy,
science-fiction, action/adventure, and horror. Students will use their knowledge of the various elements of cinema to analyze and critique films studied in class. Assessments will include class discussions, film reviews, and written reflections. Students may contract for Honors level work and credit.

| 1768 | Honors Literature to Film II (Grade 12 only) | 2.0 credits |
| :--- | :--- | :--- |
| 1769 | CP Literature to Film II (Grade 12 only) | 2.0 credits |

Literature to Film II is designed to show students how film is a form of literature. By viewing modern American films, students will learn that good film, like good literature, has certain elements in common. Students will be expected to understand motifs, symbols, metaphors, allusions, plot, theme, and other literary elements as they relate to both film and literature. In addition, students will develop an appreciation for the interaction of film elements such as scripting, directing, acting, producing, lighting, sound, music, editing, cinematography, special effects, set design and costuming. Students will learn to recognize such film genres as drama, comedy, and horror. Students will use their knowledge of the various elements of cinema to analyze and critique films studied in class. Assessments will include class discussions, film reviews, and written reflections. Taking Literature to Film I is not a prerequisite, but we will build on themes and concepts discussed in Film I. We will explore genres such as science-fiction, action/adventure, and animation. Students may contract for Honors level work and credit.

| 1270 | Honors Technical Writing (Required for Grade 10) | 2.0 credits |
| :--- | :--- | :--- |
| 1271 | CP Technical Writing (Required for Grade 10) | 2.0 credits |

Technical Writing is a one trimester course in which students will explore various types of written and oral communication that are most common in career/tech areas. Students will begin by studying and practicing common forms: Emails, business letters, proposals, instructions, manuals and some social media platforms. As they are necessary in a professional setting, proper written and oral grammar and mechanics will be a point of emphasis throughout. As the course progresses, students will be required to, utilizing skills gained throughout the trimester and with aid from their CTE and academic instructors, develop a project that is specific to their career/tech areas of study. This capstone project will be formally presented in class and evaluated by the course and CTE instructors.

Visual storytelling is an essential part of our human history. Today, much of our visual storytelling is accomplished through graphic novels and comics. However, as a form of literature, these are scrutinized as a lesser medium of storytelling. This course sets out to examine that stereotype. In The Graphic Novel, students will be exposed to a number of narrative forms and analyze the messages the authors and artist are trying to convey. Through careful examination of the texts, students will have a deeper understanding of what the medium of graphic novels is and what they can accomplish. This course will also give students the opportunity for both critical and creative writing. Students may contract for Honors level work and credit.
$1772 \quad$ Honors Introduction to Theater (Grades 11 \& 12) $\quad 2.0$ credits
1773
CP Introduction to Theater (Grades 11 \& 12)
2.0 credits

The fundamentals of acting are learned through exercises and through the performing of scenes and monologues. Students will study and practice exercises that explore and promote relaxation, observation, concentration, creative imagination, self-awareness, physical and vocal expression, the basics of script analysis, and the acting process. The course is an experimental, practical approach to the study of acting. Students may contract for Honors level work and credit.

## English Language Learner Education

The primary goal of the English Learner Education Program is to enable English Learners to achieve communicative and linguistic competence in English and to perform in academic content classrooms with high expectations. The courses have been structured following the WIDA Standards Frameworks. Students are placed into the appropriate level for their English language development based on ACCESS scores or results from the WIDA Model or on-line WIDA screener. Benchmark assessments have been developed in each class at each level to ensure that students are well prepared to move between levels and be successful in all of their classes at Northeast Metro Tech High School and beyond.

| 1129 | CP English 9 (ELL) | 6.0 credits |
| :--- | :--- | :--- |
| 1129-Lab | CP English 9 Lab (ELL) | 2.0 credits |

The focus of the ELL curriculum at this level is the development of English oral proficiency by increasing understanding of spoken English, building speaking skills, vocabulary, increasing confidence in speaking English, and developing correct American pronunciation. Instruction includes activities that promote listening, speaking, reading and writing skills at the basic level. In addition, hands-on-projects are also used to further develop emerging English proficiency.

Classroom instruction follows the WIDA Standards for Language Arts. English language learners take an annual state English proficiency exam - ACCESS (Assessing Comprehension and Communication in English) to monitor students' progress in acquiring academic English. ACCESS scores are part of the criteria used to determine future academic language placement.

1229
1229-Lab

CP English 10 (ELL)
CP English 10 Lab (ELL)
6.0 credits
2.0 credits

The focus of this ELL level curriculum is the development of English reading comprehension and emerging writing skills. Grammar is taught using a second language approach and second language texts. Oral proficiency is reinforced through class discussions, presentations, and reading aloud. The class goals are to understand spoken English, build vocabulary, and become familiar with the English language and its literature. Students develop beginning to intermediate reading and writing skills in English through short stories, poems, plays, newspaper articles, presentations and projects.

Classroom instruction follows the WIDA Standards for Language Arts. English language learners take an annual state English proficiency exam - ACCESS (Assessing Comprehension and Communication in English) to monitor students' progress in acquiring academic English. ACCESS scores are part of the criteria used to determine future academic language placement.

## 1329 <br> CP English 11 (ELL) <br> 6.0 credits

In this level ELL, students study all types of literature in the form of short stories, plays, novels, essays, and poetry to further develop reading and writing skills using a second language approach. Spoken English is more fluent and great emphasis is placed ono the development of clear written communication of facts and ideas from class reading assignments. The novel is studied as a literary form. A higher level of grammatical competency is expected at this level. Students in this level will begin working on the Junior/Senior Project, a graduation course. Students write a project proposal and a research paper related to their vocational area. Classroom instruction follows the WIDA Standards for Language Arts. English language learners take an annual state English proficiency exam - ACCESS (Assessing Comprehension and Communication in English) to monitor students' progress in acquiring academic English. ACCESS scores are part of the criteria used to determine future academic language placement.

## 1429 <br> CP English 12 (ELL) <br> 6.0 credits

The main focus of this ELL course curriculum is the refining of all areas of English proficiency: listening, speaking, reading, and writing. Short stories, essays, novels, poetry and drama are studied as literary forms. And advanced level of grammatical competency and oral productions is expected in this course as students are transitioning to full English competency. It is expected that students complete the final stages of their Junior/Senior Project. Classroom instruction follows the WIDA Standards for Language Arts. English language learners take an annual state English proficiency exam - ACCESS (Assessing Comprehension and Communication in English) to monitor students' progress in acquiring academic English.

This course is designed to strengthen reading and writing skills of $9^{\text {th }}$ grade English Language Learners. Content will be complementary to core English curriculum consistent with the Common Core State Standards and WIDA, and may also include topics of teen interest. Prewriting strategies, outlining, drafting, and revising essays and short compositions will be a point of focus.

## 1269

CP Reading and Writing Lab 10 (Parts A, B, C)
2.0 credits each

This course will further develop reading and writing skills of the $10^{\text {th }}$ grade English Language Learners. Content will be complementary to core English curriculum consistent with the Common Core State Standards and WIDA. Prewriting strategies, outlining, drafting, and revising essays and longer compositions will be a point of focus. Writing expository, argumentative, persuasive responses to informative texts and properly incorporating textual evidence into those responses will be emphasized throughout. A research paper will be a point of focus in the latter half of the year.

## 1369 <br> CP Reading and Writing Lab 11 (Parts A, B, C) <br> 2.0 credits each

This course will continue to develop reading and writing skills of the $11^{\text {th }}$ grade English Language Learners. Content will be complementary to core English curriculum consistent with the Common Core State Standards and WIDA.

1469
CP Reading and Writing Lab 12 (Parts A, B, C)
2.0 credits each

This course will continue to develop reading and writing skills of the $12^{\text {th }}$ grade English Language Learners. Content will be complementary to core English curriculum consistent with the Common Core State Standards and WIDA.

## Mathematics/Computer Science

The Mathematics Department at Northeast Metro Tech High School offers a program of courses designed to prepare students with different backgrounds for their future beyond Northeast. Math courses at NEMT make use of technology and develop critical thinking skills as well as problem-solving strategies.

A graphing calculator is an important tool for contemporary mathematics. All students are encouraged to purchase a calculator for use in school and at home, and we strongly recommend the purchase of a TI-83/TI-84 calculator. In most math classes, a TI-83/TI-84 will be a required tool. Students are urged to bring a graphing calculator to class and learn to use it wisely and skillfully.

| 2111 | Honors Algebra II (Grade 9) | 6.0 credits |
| :--- | :--- | :--- |
| 2111-Lab | Honors Algebra II Lab (Grade 9) | 2.0 credits |

This course is designed for $9^{\text {th }}$ graders, and emphasizes the applications of higher level Algebra and problem solving. The topics to be covered are: data and linear functions, systems of equations and inequalities, matrices, quadratic functions and their applications, exponential and logarithmic functions and their applications, discrete mathematics topics and trigonometry.

The Honors level group will be required to use more complex problem solving techniques and progress at an advanced pace. A graphing calculator is required.

Prerequisite: A grade of 90 or better in Grade 8 Algebra I and teacher recommendation

| 2112 | Honors Algebra I | 6.0 credits |
| :--- | :--- | :--- |
| 2112-Lab | Honors Algebra I Lab | 2.0 credits |

Algebra I introduces students to the first in a sequence of studies in finite mathematics. This course takes an informal approach assuming that the real number system exists and will conduct a systematic investigation of its properties. The course focuses on the principles and comprehension of: algebraic expressions, linear equations, polynomials, functions, introductory analytic geometry, systems of equations and radicals.

The Honors level group will be required to use more complex problem-solving skills and progress at an advanced pace.

## A graphing calculator is recommended.

Prerequisite: A grade of 80 or better in Grade 8 Pre-Algebra and teacher recommendation

| 2122 | CP Algebra I | 6.0 credits |
| :--- | :--- | :--- |
| $2122-L a b$ | CP Algebra I Lab | 2.0 credits |

This course takes an informal approach assuming that the real number system exists and will conduct a systematic investigation of its properties. This course is an introduction to variable notation, operations manipulations, functional notation and modeling. Additionally, statistics, probability, data analysis, and number sense, will be included. A spiral approach is taken to integrate MCAS preparation, problem solving, reasoning, communications, and technology.

A graphing calculator is recommended. This course will be a small group approach to learning for students who have demonstrated difficulty in mathematics.

Prerequisite: Grade 8 mathematics course

| 2212 | Advanced Honors Geometry | 6.0 credits |
| :--- | :--- | :--- |
| 2212-Lab | Advanced Honors Geometry Lab | 4.0 credits |

This course challenges students to develop logical, creative and critical reasoning skills. Students learn basic geometric facts and relationships, and the measurement of geometric figures. Critical concepts and skills such as problem solving and writing proofs are stressed. Topics range from the study of triangles, polygons, and circles to numeric trigonometry. The course will culminate with a review of Algebra II concepts required for success in the Pre-Calculus Honors course. This course
will emphasize complex problem-solving skills and progress at an advanced pace.

## A graphing calculator is required.

Prerequisite: Algebra II Honors

| 2211 | Honors Geometry | 6.0 credits |
| :--- | :--- | :--- |
| 2211 -Lab | Honors Geometry Lab | 4.0 credits |

The Geometry course challenges students to develop logical, creative and critical reasoning skills. Students learn basic geometric facts and relationships, and the measurement of geometric figures. Critical concepts and skills such as problem solving and writing proofs are stressed. Topics range from the study of triangles, polygons, and circles to numeric trigonometry. The Honors level group will be required to use more complex problem-solving
skills and progress at an advanced pace.

## A graphing calculator is required.

Prerequisite: Algebra I (H) or Algebra II $(\mathrm{H})$ and teacher recommendation

| 2222 | CP Geometry | 6.0 credits |
| :--- | :--- | :--- |
| 2222-Lab | CP Geometry Lab | 4.0 credits |

The Geometry course challenges students to develop logical, creative and critical reasoning skills. Students learn basic geometric facts and relationships, and the measurement of geometric figures. Critical concepts and skills such as problem solving and writing proofs are stressed. Topics range from the study of triangles, polygons, and circles to numeric trigonometry.

## A graphing calculator is recommended.

Prerequisite: Algebra I

## 2311 Honors Pre-Calculus <br> 6.0 credits

The Pre-Calculus course is designed for Juniors with a deep interest in mathematics. The course provides a study of functions, including polynomial, exponential, logarithmic, rational and trigonometric functions. Other topics include sequences and series, limits, vectors and conic sections. Emphasis is placed on graphing techniques and interpretation as well as real world applications. The course requires the use of complex problem solving techniques and will progress at an advanced pace. Considerable home preparation is expected.

## A graphing calculator is required.

Prerequisite: Algebra II Honors and Advanced Geometry Honors

## 2312 <br> Honors Algebra II (Grade 11) <br> 6.0 credits

This course emphasizes the applications of higher level Algebra and problem solving. The topics to be covered are: data and linear functions, systems of equations and inequalities, matrices, quadratic functions and their applications, as well as exponential and logarithmic functions and their applications, discrete mathematics topics and trigonometry.

The Honors level group will be required to use more complex problem solving techniques and progress at an advanced pace.

## A graphing calculator is required.

Prerequisite: Algebra I, Geometry and teacher recommendation

This course emphasizes the applications of higher level Algebra and problem solving. The topics to be covered are: data and linear functions, systems of equations and inequalities, matrices, quadratic functions and their applications, as well as exponential and logarithmic functions and their applications, discrete mathematics topics and trigonometry.

## A graphing calculator is recommended.

Prerequisite: Algebra I and Geometry

## 2412 Honors Pre-Calculus 6.0 credits

The Pre-calculus Investigation course is designed to prepare Seniors for college pre-calculus and calculus courses. The course reviews concepts and applications covered in previous Algebra II courses. Topics include trigonometry, advanced algebra, analytic geometry, statistical analysis, limits, series and an introduction to calculus. Emphasis is placed on graphing techniques and interpretation as well as real world applications. The Honors group will be required to use more complex problem solving techniques and progress at an advanced pace.

## A graphing calculator is required.

Prerequisite: Successful completion of Algebra II and teacher recommendation.

## 2421 CP Pre-Calculus $\quad 6.0$ credits

The Pre-calculus Investigation course is designed to prepare Seniors for college pre-calculus and calculus courses. The course reviews concepts and applications covered in previous Algebra II courses. Topics include trigonometry, advanced algebra, analytic geometry, statistical analysis, limits, series and an introduction to calculus. Emphasis is placed on graphing techniques and interpretation as well as real world applications.

## A graphing calculator is recommended.

Prerequisite: Successful completion of Algebra II and teacher recommendation

## 2426 CP Tech Prep Applied Business Math 6.0 credits

This Tech Prep math course is designed to demonstrate how widely math skills are used in "real world" situations. Topics include: how to handle the daily financial demands of banking, balancing a checkbook and reconciling a statement, investing and buying on time, borrowing and budgeting, transportation, insurance and taxes. Tech Prep students will be required to use more complex
problem-solving skills and progress at an advanced pace.

## A scientific calculator is required.

Prerequisite: Grade 11 Mathematics course and/or teacher recommendation

This math course is designed to prepare students for college entry through the demonstration of how widely math skills are used in the "real world". Topics include but are not limited to: how to handle the daily financial demands of banking, balancing a checkbook and reconciling a bank statement, investing and purchasing on time, borrowing and budgeting, transportation, insurance and taxes. The introduction of the Accuplacer testing will be included.

## A calculator is recommended.

Prerequisite: Grade 11 Mathematics course

## 2401 CP Statistics (Grade 12) 6.0 credits

This course, aligned with the Massachusetts Mathematics Frameworks, is offered to seniors (a) who achieved a final average of C or better in CP or Honors Algebra II, or (b) who have been recommended by their 11th grade mathematics teachers. The content of this course includes an introduction to statistical concepts, probability, frequency distributions, sampling, testing of hypotheses and linear regression. This course will emphasize the practical applications of statistics and the analysis of data rather than mathematical derivations of formulas. This course targets
students whose post-secondary plans include (a) the Liberal Arts, allied Health services/Nursing, Criminal Justice, or (b) any undergraduate program other than Engineering, Science, Mathematics, Computer Science, or Business

## Electives

## $2403 \quad$ Advanced Placement Calculus AB (Grade 12 only) 6.0 credits

This course is for highly motivated students who plan to pursue a career in mathematics or science. The subject matter is developed to meet the requirements for $A P$ Calculus $A B$ exam, which students are expected to take. Beginning with the limit concept, the course extends through differential and integral calculus. The use of a graphing calculator is an integral part of the course. Students are encouraged to purchase a graphing calculator so they will become adept at using this technology. Students may be expected to complete summer assignments, and considerable home preparation is expected.

## A graphing calculator is required.

Prerequisite: Honors Pre-Calculus and teacher recommendation

## 2405 Advanced Placement Statistics 6.0 credits

The AP Statistics course is equivalent to a one-semester, introductory, non-calculus based, college course in statistics. The course introduces students to the major concepts and tools for
collecting, analyzing, and drawing conclusions from data. There are four themes in the AP Statistics course: exploring data, sampling and experimentation, anticipating patterns, and statistical inference. Students use technology, investigations, problem-solving, and writing as they build conceptual understanding. Students may be expected to complete summer assignments, and considerable home preparation is expected.

A graphing calculator is required.
Prerequisite: Honors Algebra II or Honors Pre-Calculus and teacher recommendation

## 2767

2768
Advanced Placement Computer Science A (Grade 12) 6.0 credits

Students will learn the core aspects of computer science at a level comparable to a first-semester college course. They will design and implement computer programs to solve problems relevant to today's world. They will learn to apply programming tools and solve complex problems. The course includes the study of algorithms, data structures, and abstraction. Java is used as the programming language and object-oriented programming methodology is emphasized. Students may be expected to complete summer assignments, and considerable home preparation is expected.

Prerequisite: AP Computer Science Principles
$2764 \quad$ Honors Digital Literacy (Required for Gr. 9) $\quad 2.0$ credits

This course explores elementary programming concepts including variables, loops, conditional statements, functions, and objects. Students will have access to many of the computer's features, and the ability to make small but working programs and artificial worlds. Students will be introduced to the JAVA programming language as well as the concepts of data abstraction and user interface design. Students may contract for Honors level work and credit.

This one trimester course focuses on the personal financial planning decisions facing young adults today and will provide students with the foundation for understanding, planning, and developing financial strategies to help make them financially successful and knowledgeable adults. Students will learn how to manage their money by gaining knowledge about their financial options and responsibilities. Student will learn and analyze personal financial management strategies including banking services, payroll and budgeting, consumer credit, auto and student loans, savings and checking accounts, finances of housing including renting an apartment and home ownership, and investing. This course will be aligned with NCTM Standards, NBEA Computation Standards, National Education Technology Standards, and the Massachusetts Curriculum Framework Standards. Students may contract for Honors level work and credit.

## 2772 CP Standardized Test Prep (Grades $11 \& 12$ ) 2.0 credits

This trimester elective course is offered in the Fall (Seniors) and Spring (Juniors) is designed to assist and support students in all aspects of SAT/ACT test preparation, as well as an introduction to the Accuplacer Test. In this course student will practice skills and content knowledge needed to succeed on the SAT/ACT and Accuplacer, learn about the tests and their structures, learn about different strategies for taking each part of the SAT test, and practice taking and scoring partial SAT tests from each test section.

| 2773 | Honors Statistics in Sports (Grades 11 \& 12) | 2.0 credits |
| :--- | :--- | :--- |
| 2774 | CP Statistics in Sports (Grades 11 \& 12) | 2.0 credits |

This one trimester elective course deals with the collection, organization, and interpretation of numerical data as it relates to sports. The course will utilize both introductory statistics (graphs, categorical data analysis, analysis of variance), as well as more advanced methods (logistic regression, smoothing methods etc.) in the study of sports statistics and their effect. Outside reading, presentation and/or research will be expected. Students may contract for Honors level work and credit.

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2775
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2776
Honors Cybersecuity (Grades 11 \& 12)

## 2.0 credits

## 2.0 credits

Cybersecurity is designed to expose students to the ever growing and far-reaching field of cybersecurity. This course gives students a broad exposure to many aspects of digital information security, while encouraging socially responsible choices and ethical behavior. It inspires algorithmic thinking, computational thinking and "outside-the-box" thinking. Students explore the many educational and career paths available to cybersecurity experts, as well as
other careers that comprise the field of information security. Students may contract for Honors level work and credit.

| 2777 | Honors Digital Manufacturing (STEM - Grade 11 only) | 2.0 credits |
| :--- | :--- | :--- |
| 2778 | CP Digital Manufacturing (STEM - Grade 11 only) | 2.0 credits |

This course is part of the STEM Innovation lab program. The goal is for students to learn rapid prototyping using waterjets and lasers. Students will be exposed to academic learning connected to algebraic and geometric mathematics, along with engineering and physics topics related to the operation and use of these machines. Classroom projects will utilize collaborative and cooperative
learning opportunities that develop and build their skill sets through engaging and relevant tasks. Vocational learning will be supported with direct connections to topics connected to machinery and tasks related to competencies located in the students' vocational programs.

Prerequisite: Completion of two years of Science

## Science

The Science Department is committed to providing students with a variety of educational experiences that enable them to graduate as well-rounded scientifically literate citizens, who will be equipped with the knowledge needed to make sound decisions in their lives.

## Note: All year-long science offerings have a full laboratory component and meet the requirement of a lab science.

| 3133 | Honors Introduction to Physics | 6.0 credits |
| :--- | :--- | :--- |
| $3133-$ Lab | Honors Introduction to Physics Lab | 2.0 credits |
| 3132 | CP Introduction to Physics | 6.0 credits |
| $3132-L a b$ | CP Introduction to Physics Lab | 2.0 credits |

The introductory Physics course helps students recognize the nature and scope of physics and its relationship to the other sciences. Students will learn about basic topics such as motion, forces, energy, momentum, heat and heat transfer, waves, electricity, and magnetism. Students will be engaged in scientific inquiry, investigations, and labs so that they develop a conceptual understanding and basic scientific skills. The mathematics prerequisite skills are based on middle school mathematics topics such as data analysis, measurement, scientific notation, ration and proportion, and algebraic expressions. The Massachusetts Frameworks for Introduction to Physics guides the course and preparation for MCAS testing will be emphasized throughout.

CP Chemistry
6.0 credits

In Chemistry, students will be guided to develop an understanding of the basic ideas about how matter is structured and classified, using lecture, discussion and demonstrations. Problem sheets and laboratory investigations will develop student laboratory and problem-solving skills. This course is recommended for students who intend to continue their education at a four-year college. Topics covered include: matter, measurement and units, kinetic-molecular theory of matter, changes in matter, atomic structure and periodicity, chemical bonding, chemical reactions, mass relationships in chemical reactions, energy and changes in matter, and acids and bases. Mathematical skills necessary to solve problems will be reviewed and students will be expected to complete independent on-line investigations reinforcing classroom instruction.

Prerequisite: Successful completion of previous science course in sequence

| 3201 | Honors Biology | 6.0 credits |
| :--- | :--- | :--- |
| 3202 | CP Biology | 6.0 credits |

This course is for those students who took Introduction to Physics as ninth graders. Biology is a laboratory based, college preparatory course which offers an overview of the basic ideas of life sciences. Topics covered will include the nature of cells, cells and their environment, energy and metabolism, photosynthesis and cellular respiration, cell reproduction, heredity, genetics and evolution. The course stresses development of concepts and science inquiry skills, critical thinking, and data analysis.

3210 Honors Introduction to Engineering Design (PLTW/STEM) 6.0 credits
Students dig deep into the engineering design process, applying math, science, and engineering standards to hands-on projects. Students work both individually and in teams to design solutions to a variety of problems using 3D modeling software, and use an engineering notebook to document their work. [Part of the STEM Innovation Lab]

Prerequisite: Completion of at least one year of Science

| 3240 | Honors Introduction to Physics (Grade 10) | 6.0 credits |
| :--- | :--- | :--- |
| 3242 | CP Introduction to Physics (Grade 10) | 6.0 credits |

The introductory Physics course helps students recognize the nature and scope of physics and its relationship to the other sciences. Students will learn about basic topics such as motion, forces, energy, momentum, heat and heat transfer, waves, electricity, and magnetism. Students will be engaged in scientific inquiry, investigations, and labs so that they develop a conceptual
understanding and basic scientific skills. The mathematics prerequisite skills are based on middle school mathematics topics such as data analysis, measurement, scientific rotation, ration and proportion, and algebraic expressions.

## 3243 <br> CP Introduction to Physics 2 <br> 6.0 credits

This course is designed to build on the foundation of grade 9 Introduction to Physics. The main focus will be topics from the Massachusetts Physics Curriculum Frameworks. Students will continue to learn about basic tops such as motion, forces, energy, momentum, heat and heat transfer, waves, electricity and magnetism. Students will engage in scientific inquiry, investigations, and labs so that they develop a conceptual understanding and basic scientific skills.

Prerequisite: Completion of Introduction to Physics

## 3312 Honors Physics (Grade 11) 6.0 credits

Honors Physics is designed for students intending to go on to post-secondary study. Physics investigates the principles controlling the behavior of matter and energy. Topics include: Newton's Laws of Motion and Gravity, conservation of momentum and energy, kinetic theory, heat and thermodynamics, wave motion and sound, light and optics, and electricity and magnetism. The approach is highly mathematical and major emphasis is placed on problem-solving and developing critical thinking skills through project-based curriculum.

Prerequisite: Successful completion of previous science course in sequence

## 3322

CP Physics
6.0 credits

This is an applied physics course offered to 11th grade students. Physics is an intensive program with practical applications that explores four systems: mechanics, fluids, electricity, and heat. Videotapes, lectures and demonstrations, introduce each concept and then class work and labs complete the investigations of the topic. Students will learn to solve problems like a technician, utilizing the current trade and industry equipment. Students are graded on the following criteria: quizzes, tests, lab reports, homework, technology journal summaries and class participation. CP Physics is recommended for the following trades: auto body, auto tech, carpentry, electronics, electricity, HVAC, plumbing, drafting and graphic communications.

Prerequisite: Successful completion of previous science course in sequence

## 3302 <br> CP Biology (Grade 11) <br> 6.0 credits

This course is for those students who took Introduction to Physics as ninth graders. Biology is a laboratory based, college preparatory course which offers an overview of the basic ideas of life
sciences. Topics covered will include the nature of cells, cells and their environment, energy and metabolism, photosynthesis and cellular respiration, cell reproduction, heredity, genetics and evolution. The course stresses development of concepts and science inquiry skills, critical thinking, and data analysis.

| 3320 | Honors Chemistry (Grade 11) | 6.0 credits |
| :--- | :--- | :--- |
| 3321 | CP Chemistry (Grade 11) | 6.0 credits |

In Chemistry, students will be guided to develop an understanding of the basic ideas about how matter is structured and classified, using lecture, discussion and demonstrations. Problem sheets and laboratory investigations will develop student laboratory and problem-solving skills. This course is recommended for students who intend to continue their education at a four-year college. Topics covered include: matter, measurement and units, kinetic-molecular theory of matter, changes in matter, atomic structure and periodicity, chemical bonding, chemical reactions, mass relationships in chemical reactions, energy and changes in matter, and acids and bases. Mathematical skills necessary to solve problems will be reviewed and students will be expected to complete independent on-line investigations reinforcing classroom instruction.

Prerequisite: Successful completion of previous science course in sequence

## Electives

3331
CP Environmental Science (Grades 11 \& 12)

## 6.0 credits

The Environmental Science course focuses on global as well as local environmental issues. Understanding of the causes and possible solutions to these issues will be presented through scientific thinking and inquiry learning about our environment. Emphasis is placed on direct student involvement through project learning, hands on activities, and internet research.

Prerequisite: Completion of at least one year of Science

## 3310 Honors Principles of Engineering (PLTW) 6.0 credits

Through problems that engage and challenge, students explore a broad range of engineering topics, including mechanisms, the strength of structures and materials, and automation. Students develop skills in problem-solving, research, and design while learning strategies for design process
documentation, collaboration, and presentation.
Prerequisite: Completion of Honors Introduction to Engineering Design (PLTW)

| 3341 | Honors Anatomy and Physiology (Grade 11) | 6.0 credits |
| :--- | :--- | :--- |
| 3342 | CP Anatomy and Physiology (Grade 11) | 6.0 credits |

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Anatomy and Physiology is a course designed to investigate the structures and functions of the human body. An intense study of the body systems will be examined with emphasis on the nervous, skeletal, muscular, circulatory and digestive systems; an additional unit on nutrition will be included. Diseases of each system will be discussed as well as disease prevention, modern medical practices and developments, and ethical issues in the field of human biology. The class will include lecture, activities, projects, research papers, and laboratories focused on dissections of pertinent organs.

Students may contract for Honors level work and credit.
Prerequisite: Successful completion of previous science course in sequence.

## $3401 \quad$ Advanced Placement Biology (Grades 10 \& 12) 6.0 credits

AP Biology is designed to be the equivalent of a full year of Freshman Biology at the college level. It is a very strenuous course intended to prepare students for further study in the biological sciences. A high level of motivation and independence is necessary for success in this course. Laboratory work is an integral part of this course and will include extensive work with living and preserved organisms. The course will review topics covered in Biology and then delve into energetics, cellular respiration, photo synthesis, growth and development of plants and animals, regulation, development and human systems. The most current developments in the field of biology are also
covered and their impact on the future of medicine, genetics, and the environment are discussed.

Students may be expected to complete summer assignments, and considerable home preparation is expected.

Prerequisite: Science teacher recommendation
3411

## 3426

Anatomy and Physiology is a course designed to investigate the structures and functions of the human body. An intense study of the body systems will be examined with emphasis on the nervous, skeletal, muscular, circulatory and digestive systems; an additional unit on nutrition will be included. Diseases of each system will be discussed as well as disease prevention, modern medical practices and developments, and ethical issues in the field of human biology. The class will include lecture, activities, projects, research papers, and laboratories focused on dissections of pertinent organs.

Students may contract for Honors level work and credit.

Prerequisite: Successful completion of previous science course in sequence.

## $3402 \quad$ Advanced Placement Physics (Grade 12 only) 6.0 credits

This course is designed to prepare students for the AP Physics exam and will provide an introduction to physics necessary for a multitude college science courses that have physics as a prerequisite. This course is calculus based and will cover topics in kinematics, vectors, Newton's Laws, rotational dynamics, gravitation, work and energy principles, and simple harmonic motion. The course work will focus on problem solving. AP Physics students are expected to take the AP Physics exam given in May.

Prerequisite: Concurrent enrollment in Calculus or permission of the teacher.

## 3413 <br> Honors Physics <br> 6.0 credits

Honors Physics is designed for students intending to go on to post-secondary study. Physics investigates the principles controlling the behavior of matter and energy. Topics include: Newton's Laws of Motion and Gravity, conservation of momentum and energy, kinetic theory, heat and thermodynamics, wave motion and sound, light and optics, and electricity and magnetism. The approach is highly mathematical and major emphasis is placed on problem-solving and developing critical thinking skills through project-based curriculum.

Prerequisite: Successful completion of previous science course in sequence

## 3423

CP Physics
6.0 credits

Physics is an intensive program with practical applications that explores four systems: mechanics, fluids, electricity, and heat. Videotapes, lectures and demonstrations, introduce each concept and then class work and labs complete the investigations of the topic. Students will learn to solve problems like a technician, utilizing the current trade and industry equipment. Students are graded on the following criteria: quizzes, tests, lab reports, homework, technology journal summaries and class participation. CP Physics is recommended for the following trades: auto body, auto tech, carpentry, electronics, electricity, HVAC, plumbing, drafting and graphic communications.

Prerequisite: Successful completion of previous science course in sequence

## $3410 \quad$ Honors Civil Engineering and Architecture (PLTW) 6.0 credits

Civil Engineering and Architecture (CEA) is a high school level specialization course in the PLTW Engineering Program. In CEA students are introduced to important aspects of building and site design and development. They apply math, science, and standard engineering practices to design both residential and commercial projects and document their work using 3D architectural design software. Utilizing the activity-project-problem-based (APB) teaching and
learning pedagogy, students will progress from completing structured activities to solving open-ended projects and problems that require them to develop planning, documentation, communication, and other
professional skills.

3700
3701

Honors Women in Engineering (Grades 11 \& 12)
CP Women in Engineering (Grades 11 \& 12)

## 2.0 credits

2.0 credits

Women in Engineering will help students discover their inner engineer. This course is open to any student who would like to find out what it means to be an engineer. It will explore different engineering fields and provide an interesting and engaging curriculum relative to students' lives. Students will discover and explore various aspects of engineering and connect with other students interested in engineering and with professionals who are active in their fields. Topics include career opportunities in engineering and science as well as history of women past and present who have had an impact in the fields of math, science, and engineering, and how their work has changed the world. Students may contract for Honors level work and credit.

Prerequisite: Completion of at least two years of Science

## 3702

3703

Honors Marine Biology (Grades 11 \& 12)
CP Marine Biology (Grades 11 \& 12)

## 2.0 credits

2.0 credits

This course concentrates on the marine life typical of New England waters. Students study a variety of local organisms including sponges, jellyfish, clams, crabs, and fish. Both live and preserved specimens are studied as students learn about the structure and function of life in the oceans. Additional topics include the study of ocean water, currents, waves, pollution, ocean mining, and man's influence on the marine environment. Students may contract for Honors level work and credit.

Prerequisite: Completion of at least two years of Science

| 3706 | Honors Forensic Science (Grades $11 \& 12$ ) | 2.0 credits |
| :--- | :--- | :--- |
| 3705 | CP Forensic Science (Grades $11 \& 12$ ) | 2.0 credits |

Forensic Science is focused upon the application of scientific methods and techniques to crime and law. Recent advances in scientific methods and principles have had an enormous impact upon law enforcement and the entire criminal justice system. Scientific methods specifically relevant to crime detection and analysis will be presented with emphasis placed upon the techniques used in evaluating physical evidence. Topics include, but are not limited to, blood analysis, organic and inorganic evidence analysis, microscopic investigations, hair analysis, DNA, drug chemistry and toxicology, fiber comparisons, paints, glass compositions and fragmentation, fingerprints, soil
comparisons, and arson investigations. Students may contract for Honors level work and credit.
Prerequisite: Completion of at least two years of Science

| 3707 | Honors Material Science (Grades $11 \& 12$ ) | 2.0 credits |
| :--- | :--- | :--- |
| 3708 | CP Material Science (Grades $11 \& 12$ ) | 2.0 credits |

This course involves the study of solid matter. Four major units of study form the basis of the course: metals, ceramics/glass, polymers, and composites. Designed to appeal to a broad range of students, this course combines hands-on activities, demonstrations and student projects. The basic philosophy of the course is for students to observe, experiment, record, question, seek additional information, and, through creative and insightful thinking, solve problems related to material science. The classroom and laboratory activities are designed to be relevant to the students' lives. The course is intended to meet educational requirements for technology and science education. Topics will include crystal structure, extended and point defects, and properties of metals, ceramics, polymers, and composites.

Prerequisite: Completion of Chemistry

## Social Sciences and History

The Northeast Social Sciences/History Department strives to provide a challenging and caring academic experience. The curriculum is designed to foster an understanding and appreciation of both United States democratic heritage and its place in an increasingly interdependent world. Students are also exposed to a thematic study of World History. Emphasis is placed on reinforcing reading and writing skills to enhance critical thinking and problem-solving in all courses.

4111 Honors World History $9 \quad 6.0$ credits
World History is a thematic study of world civilization from the Enlightenment (1500) and the American Revolution (1715-1800) to the present. Some of the topics covered are political and economic revolutions, World Wars I and II, the Cold War, and the role of China and the Middle East in today's world. Students will develop their analytical and writing skills throughout the course. In-depth analysis and advanced group and individual projects will be required of Honors students.

Prerequisite: Placement testing

## 4121

CP World History 9
6.0 credits

World History is a thematic study of world civilization from the Enlightenment (1500) and the American Revolution (1715-1800) to the present. Some of the topics covered are political and economic revolutions, World Wars I and II, the Cold War, and the role of China and the Middle

East in today's world. Students will develop their analytical and writing skills throughout the course. Classroom approach will include critical thinking and problem solving, presentations, inquiry and discussion.

Prerequisite: Placement testing

## $4223 \quad$ Advanced Placement United States History $10 \quad 6.0$ credits

AP US History is designed to be the equivalent of a two-semester introductory college US History course. In AP US History students investigate significant events, individuals, development, and processes in nine historical periods from approximately 1491 to the present. Student develop and use the same skills, practices, and methods employed by historians: analyzing primary and secondary sources; developing historical arguments; making historical comparisons; and utilizing reasoning about contextualization, causation, and continuity and change over time. The course also provides seven themes that students explore throughout the course in order to make connections among historical developments in different times and places: American and national identity; migration and settlement; politics and power; work, exchange, and technology; America in the world; geography and the environment; and culture and society. Students may be expected to complete summer assignments, and considerable home preparation is expected.

| 4212 | Honors United States History 10 | 6.0 credits |
| :--- | :--- | :--- |
| 4222 | CP United States History 10 | 6.0 credits |

Students begin their study of US History with a review of the Revolution, constitutional principles, and events of the early Republic. Students examine the causes and consequences of the Civil War, industrialization, immigration, US expansion and progressivism through 1900. Students will develop their analytical and writing skills throughout the course. In-depth analysis and advanced group and individual projects will be required of Honors students.

Prerequisite: Honors - Grade of 80 or better in World History $9(\mathrm{CP}$ or H) and/or teacher recommendation
$4270 \quad$ Honors $21^{\text {st }}$ Century Civics (Required for $10^{\text {th }}$ gr) $\quad 2.0$ credits
$4271 \quad$ CP 21 ${ }^{\text {st }}$ Century Civics (Required for 10 gr.) 2.0 credits

This course covers the founding principles and governmental structures of the United States and Commonwealth of Massachusetts, protocols around governance, citizen engagement, voting, symbols of the Commonwealth and nation. Students participate in a process of identifying a communal issue important to them, then learn how to be citizen change-agents to affect positive outcomes to resolve the issue. Civics project completed during this class meets MA DESE requirement.

AP US History is designed to be the equivalent of a two-semester introductory college US History course. In AP US History students investigate significant events, individuals, development, and processes in nine historical periods from approximately 1491 to the present. Student develop and use the same skills, practices, and methods employed by historians: analyzing primary and secondary sources; developing historical arguments; making historical comparisons; and utilizing reasoning about contextualization, causation, and continuity and change over time. The course also provides seven themes that students explore throughout the course in order to make connections among historical developments in different times and places: American and national identity; migration and settlement; politics and power; work, exchange, and technology; America in the world; geography and the environment; and culture and society. Students may be expected to complete summer assignments, and considerable home preparation is expected.

| 4312 | Honors United States History 11 | 6.0 credits |
| :--- | :--- | :--- |
| 4322 | CP United States History 11 | 6.0 credits |

Students continue their study of US History of the $20^{\text {th }}$ and $21^{\text {st }}$ centuries. They learn about American isolationism, World War I, the economic history of the Great Depression, New Deal, World War II, and the Cold War, concluding with an examination of domestic and global policies in the first two decades of the $21^{\text {st }}$ century. Students will develop their analytical and writing skills throughout the course. In-depth analysis and advanced group and individual projects will be required of Honors students. Civics project completed during this class meets MA DESE requirement.

Prerequisite: Honors - Grade of 80 or better in United States History 10 (CP or H) and/or teacher recommendation

## Electives

## $4722 \quad$ Advanced Placement Psychology 6.0 credits

AP Psychology is designed to introduce students to the systematic and scientific study of the behavior and mental processes of human beings and other animals. Students will be exposed to the psychological facts, principles, and phenomena associated with each of the major subfields within psychology. They will also learn about the ethics and methods psychologists use in their science and practice. Students may be expected to complete summer assignments, and considerable home preparation is expected.
$4732 \quad$ Honors Introduction to Psychology (Grades $11 \& 12$ ) 2.0 credits
$4731 \quad$ CP Introduction to Psychology (Grades 11 \& 12) 2.0 credits

This is an introductory behavioral social science course. The curriculum provides basic understandings in the history of psychology, the scientific approach to social studies, schools of psychology, learning and memory, psychological dysfunction and parapsychology. Current issues in psychology will be presented throughout the course. Students may contract for Honors level work and credit. Students may contract for Honors level work and credit.

## $4421 \quad$ Honors Consumer Education (Grades 11 \& 12) 2.0 credits <br> 4442 CP Consumer Education (Grades 11 \& 12) 2.0 credits

Consumer Education examines the psychology of advertising, the wise use of credit, and the deceptive practices of which consumers should be aware. Course objectives are accomplished through reading, discussion and role-playing. Students may contract for Honors level work and credit.

| 4760 | Honors Contemporary World Issues (Grades $11 \& 12$ ) 2.0 credits |  |
| :--- | :--- | :--- |
| 4761 | CP Contemporary World Issues (Grades $11 \& 12$ ) | 2.0 credits |

This course is designed to be as current as possible with the ever changing 24 hour news cycle. The primary goal of the class is to introduce the students to the world of civics, and have them gain an understanding of how the government works. In addition, a focus is put on the political, socio-economical, and humanitarian issues facing our country. We also have a focus on local and state news as well as world news. The class is geared towards spirited debates and analysis on the issues facing our world and the class is designed to teach the students how to write unbiased historiographical writing. Students are expected to develop a habit of reading or watching daily news. Students may contract for Honors level work and credit.

## 4762 Honors Introduction to Criminal Justice (Grs. $11 \& 12$ 2.0 credits

$4723 \quad$ CP Introduction to Criminal Justice (Grades $11 \& 12$ ) 2.0 credits

This course emphasizes selected major themes in US Law. The topics covered range from the definition of law, why laws are important, the court system, and crime in America. Within the Criminal Justice process, it covers the investigation, proceedings before the trial, and the trial itself. The expectation of the class is for "students to come to appreciate our legal systems and understand how basic legal concepts affect their own lives." Students are expected to study topics in great length and will be responsible for group and individual work.

Students may contract for Honors level work and credit.

4763
4724
Honors Introduction to Sociology (Grades 11 \& 12) CP Introduction to Sociology (Grades 11 \& 12)

## 2.0 credits

2.0 credits

This course emphasizes selected major themes in society and culture. It is the scientific study of human groups and their relations with one another. Students will focus on why some groups prosper while others do not. And, how a group influences an individual. The topics range from the definition of sociology, the nature of culture, conformity and deviance, roles, relationships, and groups.

Students may contract for Honors level work and credit.

| 4764 | Honors Pop Culture (Grades 11 \& 12) | 2.0 credits |
| :--- | :--- | :--- |
| 4765 | CP Pop Culture (Grades $11 \& 12$ ) | 2.0 credits |

American Pop Culture will illuminate the interconnectedness that exits among the political, social and cultural trends of the times. This will require extensive exposure and discussion pertaining to the music, art, literature, film, television and primary sources from the 1950's through the early 2000's. Students may contract for Honors level work and credit.

## World Language

The World Language program at Northeast Metro Tech High School is designed to develop a world language foundation that will prepare students appropriately for entry to college and more importantly, prepare students to understand the diversity of cultures. Students will expand their opportunities and abilities to communicate in an increasingly diverse world, and to prepare to work in the increasing competitive worldwide economy. The goal of the World Language program is to make foreign language acquisition at Northeast a positive experience that builds useful communication skills, encourages perseverance and discipline, and creates young adults with an ability to appreciate and understand that each culture has its own world-view.

| 5711 | Honors Spanish I | 6.0 credits |
| :--- | :--- | :--- |
| 5721 | CP Spanish I | 6.0 credits |

This course is designed for the beginner in Spanish, or students who need a stronger base in the language. Students are introduced to basic speech and expression in Spanish that will provide a foundation for the development of communication skills. The fundamental sound patterns of Spanish will be presented along with vocabulary and structures that will allow the student to communicate on a basic level. Honors courses move at a faster pace than College Prep courses and will include additional assignments.
$5712 \quad$ Honors Spanish II $\quad 6.0$ credits

This course builds upon basic skills introduced in Spanish I. Emphasis is placed on the development of communication skills by reinforcing Spanish expressions and dialogue. Grammar, vocabulary, and cultural points will be presented and expanded through reading and writing assignments. Using the target language is the main goal of the course to promote language fluency and prepare our students to use the language confidently. Honors courses move at a faster pace than College Prep courses and will include additional assignments.

Prerequisite: 90 or better in Hon/CP Spanish I and teacher recommendation for Honors

| 5713 | Honors Spanish III | 6.0 credits |
| :--- | :--- | :--- |
| 5723 | CP Spanish III | 6.0 credits |

This course is designed to build upon previously acquired speaking, listening, writing, and comprehension skills developed in Spanish I and Spanish II. Oral recitation and expression is an integral component of this course, along with more intensive vocabulary and grammar study. Emphasis on language, relevancy and application to everyday life experiences, interests and the job world is stressed. There is attention to Spanish literary contributions and a focus on culture. Honors courses move at a faster pace than College Prep courses and will include additional assignments.

Prerequisite: 90 or better in Hon/CP Spanish II and teacher recommendation for Honors

| 5714 | Honors Spanish IV | 6.0 credits |
| :--- | :--- | :--- |
| 5724 | CP Spanish IV | 6.0 credits |

This course utilizes a thematic approach to encourage the advancement of students' listening, speaking, reading and writing skills in Spanish. Through the use of film, short stories and authentic Spanish/Hispanic texts, students will enhance their knowledge of Spanish culture and literature.

Prerequisite: 90 or better in Hon/CP Spanish III and teacher recommendation for Honors

| 5731 | Honors Italian I | 6.0 credits |
| :--- | :--- | :--- |
| 5741 | CP Italian I | 6.0 credits |

This course engages the learner to develop basic communication skills around topics of daily life including family and home life, school, daily activities, and likes and dislikes. Students will practice and develop listening, reading, writing, and speaking skills through the use of various resources as well as interactive activities in the classroom. They will also begin to explore the geography and culture of Italy.

| 5732 | Honors Italian II | 6.0 credits |
| :--- | :--- | :--- |
| 5742 | CP Italian II | 6.0 credits |

This course will be conducted primarily in Italian, and students are expected to communicate primarily in Italian. Students will acquire increased proficiency in listening comprehension, and in speaking, and will the development of their skills in reading, writing and cultural understanding through active class participation and independent practice such as homework, reading, and projects. Students will continue to explore the geography and culture of Italy.

5743

Honors Italian III CP Italian III
6.0 credits
6.0 credits

This course continues with skills acquired in Italian I and II. In alignment with the Massachusetts World Language Frameworks, the Italian III course is designed to allow students to continue acquiring more advanced skills in reading, writing, listening and speaking while exploring links between the Italian language and the cultures of Italy. The course aims for a proficiency approach with attention given to the three modes of communication: Interpersonal (two-way unrehearsed communication between individuals), Interpretive (one-way communication via reading and listening) and Presentational (one-way communication using speaking and writing). Again, this course will be conducted primarily in Italian, and students are expected to communicate in the target language as much as possible.

## Wellness

Health Education and Physical Education combine to create a Wellness program that is an integral part of the educational curriculum. The comprehensive goals and objectives of the program address the physical, social, emotional, and mental health of the students. In Physical Education classes the emphasis is on equitable participation in interactive group and individual activities that will enhance the student's fitness level, skill ability and knowledge. Co-educational classes are designed to provide opportunities for social interaction among students to help students understand and value the benefits of regular physical activity. The health component focuses on healthy decision-making understanding human needs as it relates to choice, positive and negative influences, and identifying behavior change strategies and goal setting. The opportunity for students to develop a positive self-image, learn respect for differences and develop cardiovascular efficiency are important aspects of the Wellness program.

## 9161

CP Health Education 9 (Required for Gr. 9)
2.0 credits

Freshman Health class is a required course and focuses on providing current information on relevant topics that encourage students to make safe, responsible decisions concerning their health. This class addresses the following topics: substance abuse, healthy relationships and teen dating violence, self-esteem, first aid and CPR, and the influence of media and its connection to overall health.

Physical Education at Northeast is the aspect of the educational process that utilizes physical activity to contribute to an individual's fitness, psychomotor, cognitive, and affective areas of development. The emphasis is on equitable participation in interactive group and individual activities that will enhance the student's fitness level, skill ability and knowledge. This comes in a variety of activities in unit form such as Project Adventure, individual sports, and team collaboration.

## Electives

## 9760 <br> CP Physical Education <br> 2.0 credits

The primary focus of this physical education course is to develop teamwork and cooperation within a working group. The objective is to form an effective unit through collaboration. Team building is an important factor in this project-based learning environment. The goal of a team is to work effectively as a group to pursue positive results. Communication skills, leadership skills, and the ability to work closely together as a class to problem solve are components of a successful team.

## $9770 \quad$ Project Challenge <br> 2.0 credits

Students will work together in a cooperative manner to achieve a common goal. The course is designed to increase self-confidence, develop communication skills, gain a better appreciation for individual differences, and learn to trust oneself and others to better cooperate in a group.

## 9771

CP Lifetime Activities
2.0 credits

This course promotes a healthy lifestyle through recreational activities. Activities may include badminton, tennis, volleyball, table tennis, fitness walking, bocce, horseshoes, golf, whiffle ball, and hiking.

Students will be participating in daily fitness routines utilizing a variety of fitness techniques and equipment. Students will develop personal fitness plans to meet their individual goals and keep daily records of their progress. Students will also learn about the importance of good nutrition for maintaining a healthy lifestyle.

## 9775 <br> CP Competitive Games <br> 2.0 credits

This course is designed to center around competitive team sports. Sportsmanship and team building are emphasized. Respect for the rules, game play and strategies necessary for team games are a must. The focus is on traditional and non-traditional team activities, which include; flag football, baseball/softball, floor hockey, basketball, volleyball, ultimate Frisbee, handball, cricket, lacrosse and soccer.

## $9776 \quad$ CP Milestones in Public Health <br> 2.0 credits

Students will examine situations that currently influence the quality of life and ways to improve the health and well-being of people in local communities and around the globe. Students will study historical trends in health and disease prevention. Students will create a public health campaign focusing on an issue related to physical, mental, environmental or spiritual health.

## 9777 CP Strength and Conditioning 2.0 credits

This course will introduce the basics of strength and conditioning. Students will learn proper weight training techniques, introductory strength training theory and application, leading to an individualized training program. This course will also focus on various exercise techniques as well as strength and conditioning principles.

## 9778

CP Yoga
2.0 credits

Experience the benefits of yoga with this fun and relaxing yoga practice for beginners. Yoga is especially beneficial to student, helping prevent injury by keeping the muscles flexible. It is also perfect for stressed out students! The class will consist of a dynamic flowing sequence of postures linking breath and movement. Practice begins with postures to warm up all major muscles and joints, and then moves into a more challenging series to build core strength, flexibility, and endurance. Class ends with deep relaxation. Emphasis is on alignment, safety, and fun! All levels welcome.

# Career/Technical Program 

## Freshman Exploratory

The Exploratory Program at Northeast Metro Tech High School is designed to allow students to make informed decisions in choosing a vocational technical area which they wish to pursue in grades 10, 11 and 12. The Exploratory Program provides students with experiences in career awareness by giving them an orientation to all the vocational technical areas at Northeast.

Students participate in fifteen career/technical program areas during the first fifteen shop weeks of the school year. Each freshman selects eight shops to explore and will be placed in seven additional shops by computer selection.

Freshmen will receive a numerical grade for each exploratory based on an evaluation of the student's performance. Students earn 2.0 credits on their permanent high school transcript for each passing exploratory grade (max. 30 credits, passing grade of 65). Four points will be deducted for each day absent from shop. Students are eligible to make up absences by completing one after school session with the shop and one take-home assignment per each day absent from shop.

A freshman may be allowed to re-explore a shop only if more than half of the exploratory is missed due to extenuating circumstances. Documentation is required and there must be space availability.

Freshmen make their shop selections at the end of the fifteenth exploratory. Students will be asked to rank order the exploratory shops in which they have received a passing grade. Freshmen are placed in their permanent shops for the last 9 weeks of the Freshman Year. Students earn 6 credits on their permanent high school transcript for passing Trimester 3 Shop.

A computerized selection process attempts to place all students in their first choice shop. If space in that shop is unavailable, the computer will then place students in the next shop preference where space is available. Wait Lists are generated for all shops that have filled to capacity. Students are organized on the Wait Lists according to:

1. Shop selection rank order, then
2. Numerical grade earned for that shop.

In the case of a tie, where students have equal numerical grades for a shop, the tie will be broken by using the following criteria:

1. Average of all exploratory grades, if the tie is still not broken, then
2. Grade point average of all academic courses.

Review Process for Students Not Accepted into Selected Vocational Shop Area: Upon receipt of notification indicating that the student was not selected for enrollment in a selected shop
program, the student's parent/guardian may request a review of the decision. This request must be in the form of a letter requesting a placement review and sent to the Principal within thirty days of shop placement. The Principal will respond to the letter within thirty days, in writing, with the findings of the review.

## The Junior/Senior Project*

*Specific Dates and Deadlines are subject to annual school calendar

For the Junior/Senior Project students develop, design or create a product, service, system or event as a culmination of their learning as well as to ignite options and opportunities for further studies or employment after high school. The project is a demonstration of the student's achievement of higher order skills such as critical thinking, reading comprehension and effective communication. Students are expected to demonstrate self-directed learning in the completion of this task.

Successful completion (passing grade of 65 or better at the culmination of the project) of the Project is a district graduation requirement.

The project will consist of three (3) parts:

- Integrating Academic and Career Technical knowledge and content
- Physical Product
- Oral Presentation

Senior Projects will be overseen by the Related Instructors. The Senior Project must be started no later than the third quarter and completed no later than the beginning of fourth quarter.

Specifics regarding the Senior Project will be reviewed by faculty/administration during the School Year.

## AUTOMOTIVE COLLISION REPAIR and REFINISHING

Thousands of vehicles are involved in collisions every day. Many of these cars and trucks need to be properly restored to pre-accident condition. This is the job of the automotive collision repair technician. You can learn the skills necessary to get started in this exciting and rewarding career at Northeast. The National Automotive Technician's Education Foundation (NATEF) certified, Automotive Collision Repair and Refinishing program at Northeast offers training in all aspects of automotive collision repair, based on ASE (Automotive Service Excellence) and Inter-Industry Conference on Auto Collision Repair (I-CAR) standards.

Upon successful completion of the program, students will possess the knowledge and hands-on experience needed to excel in the workplace or as a solid foundation toward a post-secondary degree. The Automotive Collision Repair and Refinishing program at Northeast has articulation agreements with area technical colleges for those students who wish to further their training after graduation. Student safety is a priority in the Automotive Collision Repair and Refinishing program. Shop facilities and training conform to OSHA standards and all students in the program receive the OSHA certified 10 Hour General Industry safety course.

## FACILITIES:

GFS Water-borne and SprayBake Downdraft spray booths, Survivair fresh-air supplied respirator system, PPG computerized paint mixing system, Chief E-Z Liner frame machine, Chief universal frame measuring system, ADP ShopLink and Mitchell computerized auto damage estimating systems, heat inductor adhesive removal tool, mig and aluminum welders, Eagle II dent removal machine, plasma and oxy-acetylene cutting equipment.

## CAREER OPPORTUNITIES:

Upon graduation, students are employable as:
Automotive Body and Related Repairers Painter/Refinisher Technician
Glass Technician
Field Inspector/Appraiser
Auto Damage Estimator/Appraiser Claims Adjuster

## AUTOMOTIVE COLLISION REPAIR AND REFINISHING GRADUATES HAVE BEEN EMPLOYED AT THESE LOCAL BUSINESSES:

Woburn Imported Cars, Woburn, MA<br>Krazy Custom Cycles, Wilmington, MA<br>Precision Auto, Wakefield, MA<br>Today's Auto Collision Repair Center, Chelsea \& Malden, MA<br>\section*{POST - GRADUATION ARTICULATION AGREEMENTS:}<br>See the NEMT Tech Prep Programs section on the school website (www.northeastmetrotech.com)

Expert Auto Body, Wakefield, MA
Nickole Auto Body, Saugus, MA
Mahoney's Auto Body, Woburn, MA

## LICENSES, CERTIFICATIONS AND AFFILIATIONS:

OSHA 10 Hour General Industry Certification
Mobile Air Conditioning (MACS) Refrig Certification
I-CAR Platinum Individual Recognition Certification

## Course of Study

## Automotive Collision Repair and Refinishing


#### Abstract

ABX Grade 9 Exploratory 2.0 credits


During grade 9 exploratory, students will receive instruction in auto body shop safety and basic auto body repair techniques. Course content introduces students to vehicle construction, minor dent repair, masking, automotive detailing and basic airbrushing skills.

## ABXF-16 Grade 9 Shop <br> 6.0 credits

During grade 9 shop, course content will include content on the safe and proper use of all hand and power tools used in the collision repair industry. Students will be introduced to basic automotive welding, and automotive refinishing procedures.

## AB2 <br> Grade 10 Shop <br> 30.0 credits

During grade 10 shop, students will receive instruction on vehicle construction and nomenclature, computer estimating, sheet metal repair, advanced automotive welding, water-borne and solvent-based paint mixing, surface preparation and refinishing, non-structural body repair and plastic welding.

AB2R Grade 10 Related 6.0 credits

This course provides students with the theory necessary to understand the basic repair and refinishing techniques used in the collision repair and refinishing industry. Coursework is designed to address NATEF objectives. Students receive instruction in tool use and safety, vehicle construction and shop equipment procedures. Students will also attain their OSHA 10 hour general safety card as part of their instruction. Instructional delivery includes presentations, reading and writing assignments, classroom demonstrations, self-paced computer instruction and visual media presentations. Reading, writing and math assignments related to the collision repair industry are also integrated with the academic frameworks.

## AB3 Grade 11 Shop

36.0 credits

During grade 11shop, course content will focus on more advanced non-structural and structural damage while students hone their skills on live work and project vehicles. Instruction will include: damage analysis and measuring, body panel preparation, panel alignment, auto glass removal and installation and proper refinishing techniques.


#### Abstract

AB3R Grade 11 Related

\section*{6.0 credits}

This course provides students with the theory necessary to understand the basic repair and refinishing techniques at an advanced level of instruction used in the collision repair and refinishing industry. Instruction builds on coursework from the previous year and is designed to address NATEF objectives. Students receive instruction in automotive refinishing and equipment use and application, dent repair techniques and equipment and MIG welding. Instructional delivery includes presentations, reading and writing assignments, classroom demonstrations, self-paced computer instruction and visual media presentations. Reading, writing and math assignments related to the collision repair industry are also integrated with the academic frameworks. Introduction to the Jr./Sr. Project graduation requirement is also a component of their related instruction.


## AB4 Grade 12 Shop <br> 36.0 credits

During grade 12 shop, course content will include removing and replacing structural panels, identifying, measuring and straightening frame and unibody damage and diagnosing mechanical and electrical component problems. Instruction will also emphasize the development of desirable employability skills.


#### Abstract

AB4R Grade 12 Related 6.0 credits

This course provides students with the theory necessary to understand the basic repair and refinishing techniques at an advanced level of instruction used in the collision repair and refinishing industry. Instruction builds on coursework from the previous year and is designed to address NATEF objectives. Students receive instruction in frame damage analysis, computer estimating and mechanical and electrical components. Instructional delivery includes presentations, reading and writing assignments, classroom demonstrations, self-paced computer instruction and visual media presentations. Reading, writing and math assignments related to the collision repair industry are also integrated into the curriculum as evidenced by continuation and completion of the Jr./Sr. Project graduation requirement.


## AUTOMOTIVE TECHNOLOGY

The Automotive Technology department provides entry-level through advanced level learning and training in the design, theory of operation and servicing techniques of the many system components of today's automobiles. Training focuses on engine repair, brakes, automatic/manual transmission/transaxles, suspension and steering, scan tools, lab scopes, test equipment, engine machine shop, heating and air conditioning, engine performance, emission controls, small engines, auto parts sales and shop safety. Northeast's Automotive program is NATEF/ASE approved (National Automotive Technicians Education Foundation National Institute for Automotive Service Excellence), and all teachers are ASE certified. The department supports the SKILLS USA program, a national nonprofit organization supporting students who are preparing for careers in trade, technical and skilled service occupations.

## CAREER OPPORTUNITIES:

Upon graduation, students are employable as:
Motorsports Technicians
Automotive Service Advisor
Diesel Technician
Heavy Equipment Technician
Master Automotive Technician

## AUTOMOTIVE TECHNOLOGY GRADUATES HAVE BEEN EMPLOYED AT THESE LOCAL BUSINESSES:

128 Mazda / Isuzu
Kelly Auto Group
Stoneham Ford
128 Ford
Olsen Cadillac
Liberty Chevrolet
XL Hybrids
NAPA Auto Parts

Quality Volvo
Jiffy Lube
Gem Auto Parts
Flagship Motors

Danvers BMW

## POST - GRADUATE ARTICULATION AGREEMENTS:

See the NEMT Tech Prep Programs section on the school website
(www.northeastmetrotech.com)

# LICENSES, CERTIFICATIONS AND AFFILATIONS: 

OSHA 10-hour Occupational Health and Safety General Industry Training Valvoline Motor Oil Basic Certification<br>Snap-On Meter Certification<br>ASE Refrigerant Certification (ASER) 603

## Course of Study

## Automotive Technology


#### Abstract

ATX Grade 9 Exploratory

\section*{2.0 credits}

This one-week exploratory program introduces students to the automotive and associated service industries. Some of the topics covered are; personal and shop safety, principles of 4-stroke cycle engines, basic measuring skills, hand tools, vehicle maintenance, engine component identification, and disassembly and assembly. Students explore ASE career paths, such as an auto technician, parts supply specialist, machine technician, motorcycle technician, and marine technician. Students see a video on how a car is built from design to completion. Instructional delivery includes hands-on performance, computer animation, group activities, self-paced computer instruction and video presentations.


## ATXF-16 Grade 9 Shop <br> 6.0 credits

Course content introduces students to Shop experiences that include, tire service, vehicle preventative maintenance, shop safety and safe operation of tools, career opportunities, basic engine construction and design. Hands on work include wheel and tire identification, inspection, repair, dismounting, mounting, balancing, and installation. In addition the identification and repair of disc/drum brake systems are covered. This part of the course will provide the students with the basic skills and knowledge necessary for continued success in the Automotive Technology program.

AT2 Grade 10 Shop
30.0 credits

Course content introduces students to Shop experiences that include instruction and hands on training in wheel alignment fundamentals and service, steering and suspension geometry, steering/suspension fundamentals and service, automotive machine shop, basic electrical/electronic theory and operation, maintaining the engine electrical system, and servicing the automotive electrical/electronic system. Shop experiences will provide the students with the knowledge and skill training for continued success in the Automotive Technology program. Instructional delivery includes demonstrations, presentations, and hands-on performance testing.

During Grade 10 related, students will investigate and participate in this course that provides students with the theory necessary to understand and troubleshoot basic automotive sub-systems. Coursework is designed to address NATEF objectives. Students receive instruction in tool use and safety, equipment procedures, lubrication, automotive machine shop, steering and suspension geometry, 4 -wheel alignment, and introduction to braking systems. Students are also introduced to on-board computer theory and diagnostics. Instructional delivery includes presentations, reading and writing assignments, classroom demonstrations, self-paced computer instruction, electronic textbooks and visual media presentations. Reading, writing and math assignments related to the automotive profession are integrated with academic frameworks during this class.

## AT3 Grade 11 Shop

## 36.0 credits

Course content introduces students to Shop experiences that include instruction and hands on training in 4 -stroke cycle engine operation, cooling system maintenance and service, automotive machine shop, exhaust system inspection and service, basic electricity/electronics, ignition systems, service and testing of emission control systems, starting and charging systems parts, inventory, and billing procedures, and instruction and use of the MITCHELL ON DEMAND catalog/repair CD ROM information system. Shop experiences will provide the students with knowledge and skill training for continued success in the Automotive Technology program. Instructional delivery includes demonstration, presentations and hands-on performance testing.

## AT3R Grade 11 Related

6.0 credits

During Grade 11 related, students will investigate and participate in this course that provides students with the theory necessary to understand and troubleshoot basic automotive sub-systems. Instruction builds on coursework from the previous year and is designed to address NATEF and MA CVTE frameworks objectives. Students receive instruction in the principles and operation of the 4-stroke cycle engine, cooling system operation and service, use of precision measuring tools in automotive machine shop, exhaust system operation, basic electricity/electronics, ignition systems, introduction to on-board diagnostics, starting and charging systems and instructions in the use of the MITCHELL ON DEMAND catalog/repair CD ROM information system. Instructional delivery includes presentations, demonstrations, and the use of multimedia equipment. Curriculum includes reading, writing, and math assignments consistent with the automotive profession.

## AT4 Grade 12 Shop

## 36.0 credits

Course content introduces students to Shop experiences that include instruction and hands on training in service and repair of automotive sub- systems in the areas of heating and air conditioning, service and repair manuals, diagnosis and repair of clutch systems, differentials, and drive line components, principles and operation of manual/transaxle, principles and operations of automatic transmission/transaxle, fuel systems, emissions control, automotive machine shop, and the use of state of the art scan tools, lab scopes and test equipment. Students are also encouraged to learn about customer service skills. Instructional delivery includes presentations, demonstrations, and hands on performance testing, reading and writing assignments, shop demonstrations, and visual media presentations. Tests and performance evaluations are used to determine the student's level of mastery.

During Grade 12 related, students will investigate and participate in lessons that build on coursework from the previous year and are designed to address NATEF objectives. Students receive instruction in the theory and operation of the fuel system, emissions control, diagnosis of on board computer systems, heating and air conditioning, automatic and manual transmission/transaxle, clutch systems, differentials and drive line components, and use of scan tools, lab scopes, and test equipment. Instructional delivery includes presentations, demonstrations, the use of multimedia equipment and electronic textbooks. Curriculum includes reading, writing, and math assignments consistent with the automotive profession.

## BUSINESS TECHNOLOGY

The Business Technology Program offers training in areas related to the fast-paced, diverse, and exciting Business Environment. Students will be taught manual and computerized accounting using QuickBooks and TurboTax. They will also receive extensive training in the Microsoft Office Suite (Word, Excel, and Powerpoint) and Google Drive. Additionally, computer maintenance, web page development and maintenance, social media, mobile technology, cloud computing, and collaboration platforms will be covered. Students will receive "all aspects of the industry" training featuring law, management, financial literacy, marketing, entrepreneurship, customer service and retail operations via the Northeast School Store. Eligible students may apply for a seat in the Reading Co-Op Bank branch on campus where they receive basic teller training in addition to a supplemental financial literacy program. All of this training will enable students to be well-rounded employees or entrepreneurs.

## CAREER OPPORTUNITIES:

Upon graduation, students are employable as:

| Administrative Assistant | Accounting Clerks | Office Clerks |
| :--- | :--- | :--- |
| Account Managers | Bookkeepers | Office Administrators |
| AP/AR Clerks | Computer Application Specialist | Real Estate Agent |
| Bank Teller | Customer Service Representative |  |
| Payroll Specialist | Computer Support Specialist |  |
| Receptionist | Sales Representative |  |

With additional training and education, students can obtain employment as the following: Accountant Database Specialist
Financial Analyst
Financial Manager
Insurance Broker
Legal Assistants

Market Research Analyst
Medical Office Assistant
Real Estate Broker

Marketing Manager
Operations Analyst
Stock Broker

## COLLEGE ARTICULATION AGREEMENTS:

See the NEMT Tech Prep Programs section on the school website (www.northeastmetrotech.com)

## BT GRADUATES HAVE ATTENDED THE FOLLOWING COLLEGES:

UMass-Lowell
Salem State University
Suffolk University
St. Johns University
North Shore Community College
Middlesex Community College
Virginia Commonwealth University
UMass-Amherst

UMass-Dartmouth
Johnson and Wales
Bentley University
Merrimack College
Bunker Hill Community College
Bay State College
UMass-Boston

LICENSES, CERTIFICATIONS, AND AFFILIATIONS:
OSHA 10-hour Occupational Health and Safety General Industry Training Microsoft Office User Exam

## Course of Study

## Business Technology

During the Freshman Exploratory the students will be introduced to Word Processing Applications, Spreadsheet Applications, Presentations Applications, Introduction to Accounting, Computerized Taxes, Computerized Business Simulations using Virtual Sports Business Computer Simulation, Keyboarding, Social Media , Introduction to Finance, Law and Stock Markets using IPADS and career overview of high-paying and high demand job opportunities.

## OTXF-16 Grade 9 Shop

6.0 credits

New students will be exposed to all areas of the Business Technology Trade. Students will continue to build their Word Processing, Spreadsheet and Presentation computer and mobile technology skills. Students will be introduced to accounting, finance, marketing, management using simulations

## OT2 Grade 10 Shop

30.0 credits

During the Sophomore Year the students will receive training with Microsoft Office (Word, Excel and PowerPoint), Keyboarding, Technology and Accounting and Computer Related Theory, Social Media, Business, Finance, Marketing and Law Projects, Mobile Technology, Media and "All Aspects of the Trade Instruction".

## OT2R Grade 10 Related 6.0 credits

This course introduces students to traditional accounting concepts and terminology. It covers in detail the entire accounting cycle from basic transactions to closing entries. Students are introduce also to key informational technology concepts.

## OT3 Grade 11 Shop 36.0 credits

During the Junior Year, the students receive Intermediate Microsoft Office Training in Excel, Word and PowerPoint, Technology and Accounting Related Theory, Computerized Accounting and Income Tax Prep Instruction, Intermediate Business Projects, Mobile Technology and Social Media Projects and "All Aspects of the Trade Instructions". Students will be introduced to "Team" building activities.

## OT3R

Grade 11 Related
6.0 credits

In this course students build upon what was introduced during the sophomore year. Students will a start to acquire knowledge that will begin to prepare them for entry-level employment in the business field. Students will prepare ledgers, payroll reports and financial statements.

During Senior Year, the students reinforce key Microsoft Office skill, Technology or Accounting Related Theory and Business Projects and "All Aspects of the Trade Instruction". Students will be expected to work successfully in group environment. Each student will have an opportunity to develop "Employability Skills" by working as student aides in various offices and departments throughout the school. Student will have an opportunity to gain "Real Life" experience by working in our School's branch of the Webster Federal Credit Union as a teller. Seniors are strongly encourage to take advantage of Co-op opportunities. The Business Technology Program prepares and strongly encourages our graduates to continue their education at the post-secondary level.

## OT4R Grade 12 Related <br> 6.0 credits

An advanced course that will reinforce concepts learned in the previous two years of related. This course will focus on accounting for a merchandizing corporation. Depreciation and Inventory valuation will be introduced. The course is designed to prepare students for a College-level Introduction to Accounting course.

## CARPENTRY

Carpenters are the largest group of building trade workers. They usually have greater opportunities than most other construction workers to become general construction supervisors as they are involved with the entire construction process. Throughout the program, strong emphasis is placed on employment with a union shop or general contractor.

An integral component of the Carpentry curriculum involves shop workstations allowing students to practice all phases of house construction. Students are instructed in the use of hand power tools, industrial woodworking machinery, and a variety of contractor power and battery operated tools. In the related (theory) courses, particular attention is paid to the knowledge of all materials used in the trade, the layout and calculation of dimensions, entry level framing, window and door installation, and blueprint reading.

## CAREER OPPORTUNITIES:

Upon graduation, students are employable as:

Carpenter
Millrights
Pile Driver
Residential Carpenter
Interior Systems Carpenter

Lather and Drywaller
Cabinetmaker and Millworker
Floor Layer
Roofer
Vinyl Siding Installer

# CARPENTRY GRADUATES HAVE BEEN EMPLOYED BY THE FOLLOWING COMPANIES: 

Lowe's, Peabody, MA
MA
Local Union \#26, Wilmington, MA
Home Depot, Saugus, MA

Villandry Contracting Inc., Arlington,
Local Union \#28, Medford, MA
Aronis Builders, Stoneham, MA

Local Union \# 33 Boston, MA
Griffin Interiors, Wilmington, MA
Tower Glass, Woburn, MA

# POST - GRADUATE, ARTICULATION, AGREEMENTS: <br> See the NEMT Tech Prep Programs section on the school website (www.northeastmetrotech.com) 

LICENSES, CERTIFICATIONS, AND AFFILIATIONS:<br>MAVA: DAT Division of Apprenticeship Training: Carpentry Articulation Verification<br>OSHA 10-hour Occupational Health and Safety Construction Industry Training

## Course of Study

## Carpentry

## CAX Grade 9 Exploratory

## 2.0 credits

With primary focus on safety, students complete a week long exploratory program which includes an overview of the various trades within the construction field. Topics covered include: print reading, framing, drywall and finish, as well as the application of interior and exterior finish materials. Students are instructed in the safe practices involved in construction demolition, and organizational skills.

## CAXF-16 Grade 9 Shop <br> 6.0 credits

Following shop selection, freshman Carpentry students are introduced to the basics of shop/worksite safety notably safe use of hand and portable power tools. Students complete small scale projects with emphasis on safety, measurement, layout, and basic construction math.

## CA2

Grade 10 Shop
30.0 credits

Students are introduced to the various hand, power, and industrial tools utilized in the shop and at job sites. All students complete the 10-hour OSHA (Occupational Safety and Health Administration) Construction Training Program. Carpentry students, enrolled in our competency program, receive actual hands on training involving construction techniques from the foundation to the roof. Students work in 2 person teams toward completion of a work station/mock-up addressing competencies in print reading and layout, framing, roofing, drywall installation, wall finishes, exterior siding, trim work, and floor finishes.

## CA2R

Grade 10 Related

## 6.0 credits

Students will be introduced to the fundamentals of construction carpentry including; personal worksite safety, proper use and storage of hand and power tools and ongoing development of construction nomenclature, and relevant math concepts.

Students are re-instructed as to the various safety techniques and procedures, and must pass a safety orientation review test. The house building and remodeling programs are an integral component to the students' overall development as a tradesperson. Strong emphasis is placed on the construction competency program as well as the importance of safety and teamwork.

## CA3R Grade 11 Related <br> 6.0 credits

The purpose of this course is to further the students instruction in the principles of the carpentry construction field. The course is designed to furnish the technical background to the student's experiences in the outside construction program. Initial work on the Junior/Senior project is also part of the curriculum.

## CA4 Grade 12 Shop

36.0 credits

Students are re-instructed as to the various safety techniques and procedures and must pass the safety orientation test. There is a strong emphasis placed on the opportunity to participate in the school to work program. Students continue their house building and remodeling experiences with a strong emphasis placed on completing the competency program.

## CA4R Grade 12 Related

## 6.0 credits

This course is designed to instruct students in the more advanced aspects of the carpentry construction field. Topics covered include advanced framing, job site safety and maintenance, estimating, site preparation, code requirements, purchasing/billing, job supervision and scheduling. Students also work towards completion of the narrative portion of the Senior Project

## COSMETOLOGY

Cosmetology students receive comprehensive training in all areas of hairdressing and the related fields needed to qualify for both the state licensing examination and employment as a cosmetologist. Students also learn how to manage a salon, start a business and deal effectively with clientele. Curriculum includes inventory control, record keeping and salon based technology, personal hygiene and good grooming, bacteriology, sterilization and sanitation. Anatomy and physiology play an important part in the program.

After $\mathbf{2 0 0}$ hours student will apply for an Apprentice license that allows students to work in professional salons. The Apprentice can perform services on clients.

## CAREER OPPORTUNITIES:

Upon graduation, students are employable as:
Hair Stylist
Manicurist
Hairdresser
Nail Technician

Make-up Artist Aesthetician
Hair Colorist
Cosmetologist

Cosmetology graduates have been employed by the following companies:<br>Dellaria's Salon, Boston, MA,<br>James Joseph Salon, Boston, MA<br>Laschi's, Reading, MA<br>MA<br>Phillip Ciampa, Lexington, Winchester \& Wakefield

## POST - GRADUATE ARTICULATION AGREEMENTS:

See the NEMT Tech Prep Programs section on the school website (www.northeastmetrotech.com)

## Licenses, Certifications, and Affiliations:

Licensed Cosmetology Apprentice
Advanced Haircoloring Certification
Barbicide Santitation and Disinfectant Certification
SOCAP Hair Extensions: Product Specific Hair Certification
Cosmetologist License (COSL) 1,000 hours (preparation exam)
OSHA 10-hour Occupational Health and Safety General Industry Training

## Course of Study

## Cosmetology

## COS Grade 9 Exploratory

## 2.0 credits

The Grade 9 Exploratory Program in Cosmetology promotes the understanding of the art and science in making hair, skin, and nails attractive for clients. The following competencies are taught: Shampooing, Zulu knots, Conditioning, Brushing, and Parting the hair, Henna hand make-up, Roller styling, Nail art, Multicultural Concepts of beauty, Dread locks, Face painting on mannequins, Face painting on masks, Afro Styling, Braiding, False beard and mustache, and Stained glass make-up. Students also practice all safety procedures, including sterilization and sanitation precautions as shown by the instructor. The integration of academics and career technical curriculum includes preparation for MCAS examinations with daily math quizzes and daily writing assignments. While Exploratory students do not need to wear a uniform while in shop, they must dress appropriately for the Cosmetology Shop setting.

## COSF-16 Grade 9 Shop

## 6.0 credits

Grade 9 students will study the History of Cosmetology and Safety in the Salon which includes infection control and sanitation. Students will practice shampooing, brushing, combing, parting and braiding the hair.

## CO2 Grade 10 Shop

## 30.0 credits

Grade 10 Cosmetology students will study the following competencies: Wet Hairstyling: Shampooing, conditioning, temporary hair coloring, finger waving, roller sets, pin curl placement, braiding and comb outs; Blow Drying: Round brush styling, iron curling, comb-outs, wig and hairpiece styling; and Facials: Eyebrow shaping, waxing, manicuring, pedicuring and make-up application. Students will also practice all safety procedures, sterilization and sanitation precautions as shown by the instructor.

## CO2R Grade 10 Related <br> 6.0 credits

Grade 10 Cosmetology Related students will study the following competencies: Cosmetology / The History and Opportunities, Life Skills, Professional Image, Facials, Communication, Infection Control, Properties of Hair and Scalp, Hair Design Principles, Shampooing, Rinsing and Conditioning, Braiding, Wigs and Hairpieces, Histology of Skin, Hair Removal, Facials, Makeup, Nail Structure, Manicuring/ Pedicuring, Anatomy/ Physiology. Materials Required: Text book, work books, uniform and shop kit. Students must replace any materials missing from shop kits as needed.

## CO3 Grade 11 Shop <br> 36.0 credits

Grade 11 students will study the following competencies: Salon Management, Thermal Hair Styling, Roller Sets, Blow Drying, Haircutting, Permanent Waving, Waxing, Advanced Skin Care and Basic Hair Coloring. The students will practice all safety procedures, sterilization and sanitation precautions as shown by the instructor.

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\text { CO3R Grade } 11 \text { Related } 6.0 \text { credits }
$$

Grade 11 Cosmetology Related students will study the following in theory and practical: Salon Management, Nails/Diseases/Disorders, Thermal Hair Styling, Skin/Diseases/Disorders, Hair Styling, Removing Unwanted Hair, Haircutting, Electricity, Permanent Waving, Chemistry, Facials, Anatomy/Physiology, and Hair Coloring. Materials Required: Text book, work books, uniform and shop kit. Students must replace any materials missing from shop kits as needed.

Grade 12 Cosmetology students complete curriculum in preparation for the Massachusetts State Board Examination for their Operators' License. Licensing comprises $50 \%$ of the third term grade. Successful licensing allows students opportunities to participate in the Cooperative Education Program (additional eligibility criteria apply). Senior Cosmetology students complete the following competencies: Salon Management/Senior Project; Chemical Hair Relaxing/ Reconstruction, Facials/ Skin Care/ Cosmetics, Hair Coloring/ Special Effects, Color Analysis, Sterilization/ Sanitation, Haircutting, Clinic/Salon Management, Electricity, Client Procedure / Conduct, Anatomy/Physiology, Salon Management, Chemistry, State Board Review/CD Review.

## CO4R Grade 12 Related <br> 6.0 credits

Grade 12 Cosmetology Related students prepare and present Senior Projects to a panel of professionals in the field and Northeast faculty. Grade 12 students will also work towards completion of text book and workbooks, study guides, and state board review books. Materials Required: Text book, work books, uniform and shop kit. Students must replace any materials missing from shop kits as needed.

## CULINARY ARTS

Advancement opportunities for chefs, cooks, and food preparation workers depend on their training, work experience, and ability to perform more responsible and sophisticated tasks. Many food preparation workers, for example, may move into line cook positions. Chefs and Cooks who demonstrate an eagerness to learn new cooking skills and to accept greater responsibility may also move up and be asked to train or supervise lesser skilled kitchen staff. Others may move to larger or more prestigious kitchens and restaurants. Some chefs and cooks go into business as caterers or personal chefs or open their own restaurant. Others become instructors in culinary training programs. A number of cooks and chefs advance to executive chef positions or food service director positions, particularly in hotels, clubs, and larger restaurants.

## CAREER OPPORTUNITIES:

Upon graduation, students are employable as:
Production:
Baker
Bartender

Chef (Restaurant, Catering, Corporate)
Cook (Line, Prep)
Food Preparation Worker
Management:
Owner
Manager Assistant Manager
Steward

Service:

Maître 'D
Expediter
Waiter or Waitress

Host or Hostess
Cashier
Bus Person

## ARTICULATION AGREEMENTS:

See the NEMT Tech Prep Programs section on the school website (www.northeastmetrotech.com)

## NATIONAL CERTIFICATIONS:

OSHA 10-hour Occupational Health and Safety General Industry Training National Restaurant Association ServSafe Certificate

## COURSE OF STUDY

## Culinary Arts

## CUX

Grade 9 Exploratory

## 2.0 credits

The exploratory program introduces students to dining room services and back of the house production including bakery production, kitchen production, sanitation and safety.

## CUXF-16 Grade 9 Shop

## 6.0 credits

Freshman students execute all the dining room duties while in shop. Students are exposed to all aspects of table service and use of a "Point of Sale" electronic system. Students experience weekly shifts in the kitchen and bakery to acquire the basics of back of the house production. Sanitation, safety, and basic rules and regulations of the industry are also covered.

## CU2 Grade 10 Shop <br> 30.0 credits

Curriculum for the Grade 10 students addresses the front of the house with students developing basic kitchen and bakery skills. Content includes customer service, table service, cashier service protocols, using "Point of Sale" electronic system, sanitation and safety procedures, host duties, kitchen and bakery utilities services, cold food production, basic culinary skills, cookies and roll production and basic bakery skills. Students also work towards their national ServSafe sanitation certification.

## CU2R Grade 10 Related <br> 6.0 credits

Grade 10 related students will learn career terminology, kitchen safety, tools and equipment, food items, cooking methods and techniques, basic nutrition and culinary related math and science. Sanitation laws and procedures, health and safety, utility and dining room service topics will be reinforced.

## CU3 Grade 11 Shop

36.0 credits

Grade 11 students will be concentrating on cooking and baking throughout the year. Topics will include cooking methods, fruits and vegetables, grains, legumes and starches, marinades, salads and dressings, thickening agents, soups and sauces, cookie production, quick breads, yeast dough, pie production, bakery scaling and basic bench working techniques.

## CU3R Grade 11 Related

## 6.0 credits

Grade 11 shop themes are reinforced during the related course. Cooking methods, fruit and vegetable identification, grains, starches, soups, stocks, salads and dressings, and baking fundamentals are emphasized. Culinary related math and science skills are developed. Related students will also begin to address their Junior/Senior project requirements.

## CU4 Grade 12 Shop 36.0 credits

Grade 12 students will be concentrating on cooking and baking as well as front of the house management techniques. Content area includes advanced cooking and baking skills, merchandising, store
management, buffet presentations, meat and seafood fabrication and dining room management. Grade 12 students maintain responsibility for food inventory, ordering, receiving and inspection procedures.

## CU4R <br> Grade 12 Related <br> 6.0 credits

Students will be introduced to meat and seafood identification, meat grading and fabrication, menu planning and design, food ordering procedures, pastry and cake production, management controls and procedures, and advanced culinary related math and science. The Junior/Senior project will be completed.

## DENTAL ASSISTING

Dental Assisting is one of the fastest growing careers in Massachusetts. The Northeast program offers a comprehensive curriculum aligned with the MA DESE Dental Assisting framework. Students are given the opportunity to gain knowledge of administrative and clinical dental procedures through academic and practical instruction. The students receive clinical experience at Tufts University School of Dental Medicine. Upon successful completion of their rigorous curriculum, students are prepared to take the Dental Assisting National Board certification exams in radiology health and safety, infection control, and National Entry Level Dental Assistant.

## CAREER OPPORTUNITIES:

Upon graduation, students are employable as:

| Dental Assistant | Dental Products Sales Representative |
| :--- | :--- |
| Orthodontic Assistant | Insurance Claims: Medical Records |
| Surgical Dental Assistant |  |

## COLLEGES AND UNIVERSITY PROGRAMS:

Dental Assistant Graduates have been enrolled in the following Colleges:
Middlesex Community College
University of Bridgeport
Bristol Community College
Quinsigamond Community College
NH Technical Institute
Forsyth Dental Hygiene Program/ Massachusetts School of Pharmacy

## COLLEGE ARTICULATION AGREEMENT:

See the NEMT Tech Prep Programs section on the school website (www.northeastmetrotech.com)

## CERTIFICATIONS AND LICENSES:

# American Heart Association BLS, CPR, AED and First Aid <br> OSHA 10-hour General Industry Training <br> Dental Assistant National Board (DANB) National Entry Level Dental Assistant Certification <br> Dental Assistant National Board (DANB) Infection Control Certification (preparation for exam) <br> Dental Assistant National Board (DANB) Radiology Certification (preparation for exam) <br> Massachusetts Registered Dental Assistant RDA (may register upon graduation) 

## Course of Study

## Dental Assisting

## DAX Grade 9 Exploratory <br> 2.0 credits

Freshman students are introduced to the Dental Assistant profession. They are exposed to clinical and administrative duties of the dental assistant. Dental career opportunities are explored. Skills include safety, clinical, clerical, and dental laboratory competencies. The freshman students study business math as it relates to operating a dental office. This daily class helps prepare the student for the MCAS exam. Students study the identification of teeth and nutrition as it relates to dental health.

## DAXF-16 Grade 9 Shop 6.0 credits

Students begin their dental assisting curriculum during the $4^{\text {th }}$ quarter. Competencies include roles and responsibilities of the dental assistant, introduction to radiology, basic clerical and chair side procedures. Students complete the OSHA training program.

## DA2 Grade 10 Shop

## 30.0 credits

Sophomore year the dental assisting student will learn both clinical and clerical skills. The clinical aspect is an introduction to infection control procedures, patient exam preparation, and basic operatory management. The clerical focus is on appointment book scheduling, inventory control, and insurance forms. Sophomore students participate in community service by providing Dental Health Education programs to Northeast's Preschoolers.

## DA2R Grade 10 Related <br> 6.0 credits

Sophomore students study dental charting, oral anatomy, tooth morphology, tooth histology, tooth embryology and nutrition.

## DA3 Grade 11 Shop

36.0 credits

Junior year the dental assisting student will focus on restorative materials, dental instruments used in general dentistry, as well as procedures and techniques used in today's offices. Students are introduced to analog and digital radiology; competencies are developed in exposing, developing, and mounting x-rays. Three days a week students will experience an unpaid supervised externship at Tufts School of

Dental Medicine. The students receive certification in American Heart Association CPR/AED and Red Cross First Aid.

Junior students participate in community service by providing Dental Education programs to local elementary school children.

## DA3R Grade 11 Related <br> 6.0 credits

Junior students study head and neck anatomy and the theory and safety practices of radiography.
Juniors also begin work on their Junior/Senior Project.

## DA4 Grade 12 Shop

36.0 credits

The senior year student concentrates on expanded functions and radiology health and safety in the dental practice. Students are given lab practice and written assessments to prepare them for the national credential examinations. Senior year students continue their clinical experience three days per week at Tufts School of Dental Medicine. If eligible, students may participate in Cooperative Education. The administrative concentration is on writing office procedure manuals, resume writing, and basic accounting procedures.

## DA4R Grade 12 Related 6.0 credits

Senior students study oral pathology, dental pharmacology and dental office medical emergencies. Students complete and present their Senior Project.

## DESIGN AND VISUAL COMMUNICATIONS

Students with artistic drawing talent will develop essential art skills needed to work in the professional art field and prepare to enter any art college after graduation. They will focus on building a strong professional art portfolio. Students regularly participate in hands-on experiences exploring various art techniques and state-of-the-art computer programs used in art agencies today including InDesign, QuarkXPress, Illustrator and Photoshop. Design students are educated in a professional studio environment and develop $21^{\text {st }}$ century work habits.

## CAREER OPPORTUNITIES:

Upon graduation, students are employable as:

Animation Artist
Artist/Graphic Designer
Computer Animator
Digital Artist/Illustrator/Retoucher
Graphic Artist
Illustrator
Multimedia Designer

Photographer
Photoshop Artist
Photo Retoucher
Screen Printer
Tatoo Artist
Videographer
Web Page Desinger/Artist

# DESIGN AND VISUAL COMMUNICATIONS GRADUATES HAVE BEEN EMPLOYED BY THE FOLLOWING COMPANIES: 

Mystic Design, Boston, MA
Signs by Tomorrow, Woburn, MA

## College Articulation AgreementS:

See the NEMT Tech Prep Programs section on the school website
(www.northeastmetrotech.com)

# RECENT GRADUATES FROM THE DESIGN AND VISUAL COMMUNICATIONS PROGRAM ARE ENROLLED IN: 

The New England Institute of Art, Brookline, MA Lesley University, Boston, MA
Montserrat College of Art, Beverly, MA
Massachusetts College of Art, Boston
Fitchburg State University, Fitchburg, MA
POST - GRADUATE LICENSES, CERTIFICATIONS, \& AFFILIATIONS/ PROGRAMS:
OSHA 10-hour Occupational Health and Safety General Industry Training

## Course of Study

## Design and Visual Communications

## DVX Grade 9 Exploratory <br> 2.0 credits

Students in this program will learn introductory knowledge of studio safety and basic Design and Visual communications projects. Some of the projects the students will be expected to complete include; creating an advertisement and creating two pieces artwork for a children's book. They will also be exposed to basic photography and Photoshop techniques.

## DVXF-16 Grade 9 Shop

## 6.0 credits

Students begin to develop their artistic talents by completing a number of assignments using both freehand drawing and computer based programs such as InDesign, QuarkXpress, Illustrator and Photoshop.

## DV2 <br> Grade 10 Shop <br> 30.0 credits

Students will develop a variety of art and design skills in their sophomore year. Drawing books will be issued with specific quarterly assignments to promote critical visual problem solving skills. Students study color theory through the use of watercolor, gouache, pastels, and prism color pencils and markers. Typography and practical implementation of design theory, as well as digital and reflective illustrations allows the Design students to work on a variety of graphic design projects and train on up-to-date,
industry relevant-software. Students are introduced to preparing, maintaining, critiquing and editing their own professional artist portfolio.

## DV2R Grade 10 Related <br> 6.0 credits

This course is the first of three related courses needed to complete the Design and Visual Communications competences and graduate with a certificate in the field. Students will be introduced topics including but not limited to color theory, photography, digital art, desktop publishing, web design, animation, typography and painting.

## _DV3 Grade 11 Shop <br> 36.0 credits

Students perform Ad Agency-based assignments such as: Corporate ID New Image Design Presentations, Product Ad Campaigns, TV Ad campaign / story boarding, Product Design presentations, and animated promotional Ads. Comprehensive layout presentations and critical critiques are conducted as an important and real process tool to promote inventive, exciting work. Digital photography and studio product lighting, along with QuarkXPress, Photoshop, Illustrator and Flash Computer Programs are used by the art students to produce finished comprehensive presentations.

## _DV3R Grade 11 Related 6.0 credits

This course is the second of three related courses needed to complete the Design and Visual Communications competences and graduate with a certificate in the field. Students will continue their study of the following topics: color theory, photography, and digital art, desktop publishing, web design, animation, typography and painting.

## .DV4 Grade 12 Shop <br> 36.0 credits

Critical study in specific focus areas for portfolio refinement and final review is a requirement. Students experience National Art Portfolio Day. College visits are scheduled and financial aid information is disseminated. Seniors write a college letter-of-intent-essay and design and produce a two-fold promotional mailer. A resume, cover letter, and job search / interview strategy plan will be developed in the senior year.

## DV4R Grade 12 Related <br> 6.0 credits

This course is the third of three related courses needed to complete the Design and Visual Communications competences and graduate with a certificate in the field. Students will be become proficient about the following topics: color theory, photography, and digital art, desktop publishing, web design, animation, typography and painting.

## DRAFTING AND DESIGN

The Mechanical Design component of the program recognizes that today's design tools differ from those of the past and offers students a program utilizing the latest 3-dimensional parametric modelers including "SolidWorks." Daily lectures teach the foundation of design principles. Then, students apply their knowledge to a curriculum-designed project that integrates real world applications. By the program's completion, students are able to design a mechanical project, piece by piece, by creating 3D models of each component. The students will then assemble the parts and produce a "working drawing" of the model. The 3D model can then be sent to the 3D printing machine in our onsite manufacturing lab to be built as a prototype. This systematic approach walks the students through the entire experience of design from concept to prototype and introduces the different roles that are integral to product design.

The Architectural Drafting component of the program prepares technical drawings for residential and commercial projects. Their drawings and models provide visual guidelines, details and specific dimensions for the construction industry. A major part of the curriculum uses the latest parametric 3D design software to produce drawing plans, elevation, sections, and details. The curriculum also includes architectural styles and history, structural theories, code research, sketching, presentation drawings, and model building.

## CAREER OPPORTUNITIES:

Upon graduation, students are employable as:

Architectural Drafter
CAD (Computer-Aided Design) Drafter Commercial Drafter
3D Printing Technician

Mechanical Drafter
Civil Drafting Technician
Electronics/Electrical Drafter
Digital Manufacturing Technician

## COLLEGE ARTICULATION AGREEMENTS:

See the NEMT Tech Prep Programs section on the school website (www.northeastmetrotech.com)

## RECENT GRADUATES FROM THE DRAFTING AND DESIGN PROGRAM ARE ENROLLED

AT:

Boston University<br>Wentworth Institute of Technology<br>Fitchburg State University<br>North Shore Community College<br>Middlesex Community College<br>Mass Bay Community College

Northeastern University<br>Boston Architectural Center<br>UMASS Boston<br>Bunker Hill Community College<br>New England Institute of Technology

## NATIONAL CERTIFICATIONS:

OSHA 10-hour Occupational Health and Safety Construction Industry Training

## Course of Study

## Drafting and Design

## DDX Grade 9 Exploratory

## 2.0 credits

The CAD design exploratory program introduces the students to today's cutting edge design process. Students begin their week long experience with a design challenge. Students design their own invention in a 3D mode which will be animated and tested for correct fit. When the animation is correct, students make working drawings with proper views and dimensions.

## DDXF-16 Grade 9 Shop

## 6.0 credits

Students learn about drafting shop tools and the "shop" environment. Emphasis is on basic drafting practices and principles. Daily lessons incorporate examples from text books, videos, and past practices. The students experience the theories of drafting methods through both individual and group assignments.

## DD2 Grade 10 Shop <br> 30.0 credits

This course meshes the time-tested fundamentals of mechanical design with today's most advanced design tools. Lesson topics include Introduction to Design, Sketching and Freehand Technical Design, Basic Geometric Construction, Solid Part Modeling, Assembly Modeling, Orthographic Projection/ Creating Working Drawings, Measurement, Sectional Views, Auxiliary Views, Electronic Drafting and Introduction to Rapid Prototyping. All topics are covered in an easy to understand sequence and delivered in a way that builds knowledge and confidence.

## DD2R Grade 10 Related

6.0 credits

The purpose of this course is to present the theories behind the common practices used in the mechanical design field. This course explains the "why" behind the "how to" that are learned in shop. Lessons are carefully planned to align with shop lessons and reinforce concepts necessary to master the skills. Daily lectures are offered in a discussion format.

## DD3 Grade 11 Shop

## 36.0 credits

The purpose of this course is to focus the Drafting and Design student on a variety of architectural projects. The students use Chief Architect software program to develop plans, elevations, sections and details on a variety of residential and commercial projects. Students are introduced to architectural theory, layout sketching, building materials, structural requirements, architectural components and building code regulations. Students will be introduced to the following topics: one and two story house design, stair layout, roof design, site design, kitchen and bath design, accessibility regulations and code analysis, commercial design projects. The students are required to develop and maintain a presentation portfolio with all weekly projects including sketches, notes, CAD drawings and models.

The purpose of this course is to focus the Drafting and Design student on a variety of architectural concepts, theories and terminologies. The students are introduced to architectural theory, layout sketching, building materials, structural requirements, architectural components and building code regulations. Curriculum also includes one and two story house design, stair layout, roof design, site design, kitchen and bath design, accessibility regulations and code analysis, commercial design projects, plot plans, civil drafting concepts, surveying and mapping. Students are required to develop and maintain a journal complete with weekly assignments, handouts, sketches and notes.

## DD4

Grade 12 Shop

## 36.0 credits

During their senior year, drafting students work on a variety of school approved community projects, larger commercial projects and larger residential projects. Seniors work on developing and practicing competencies that were learned during their junior year. The students are required to complete and present their Junior/Senior project having earlier chosen a mechanical, electro-mechanical or architectural based final project.

## DD4R Grade 12 Related 6.0 credits

The Grade 12 related course curriculum engages students in areas of the state competencies that they have not yet experienced while reinforcing previously learned fundamentals. Emphasis is also placed on skills essential for successful completion of the Junior/Senior Project.

## Early Childhood Education

Students develop necessary skills to become educators and care givers for infants, toddlers, and preschool aged children. ECE students assist in Northeast's on-site preschool, as well as in early childhood learning centers in the community. ECE students develop skills to foster appropriate social relationships among the preschoolers and guiding them as they learn through play. Students successfully completing the ECE program become State Certified Preschool Teachers.

## CAREER OPPORTUNITIES:

Upon graduation, students are employable as:
Nanny
Pre-school Teacher
Pre-school Teaching Assistan
Infant/Toddler Teachers

## EARLY CHILDHOOD EDUCATION GRADUATES HAVE BEEN EMPLOYED BY THE FOLLOWING COMPANIES:

KinderCare, Stoneham, MA
Creative Corner, Winchester, MA
First Steps, Stoneham, MA
Chime Time, Melrose, MA
Little Steps, Melrose, MA

## College Articulation Agreement:

See the NEMT Tech Prep Programs section on the school website (www.northeastmetrotech.com)

## Licenses:

MA Early Education and Care: Preschool Teacher
MA Early Education and Care: Infant/Toddler Certification
Here Comes The Sun Yoga Certification
American Heart Association CPR, AED and First Aid
Childcare Education Institute Online Safety Program Certification (FAME)
OSHA 10-hour Occupational Health and Safety General Industry Training

## Course of Study

## Early Childhood Education

## ECX Grade 9 Exploratory

## 2.0 credits

Students participate in hands-on activities introduced to the field of Early Childhood Education and receive exposure to safety topics inside/outside the preschool environment.

ECXF-16 Grade 9 Shop
6.0 credits

Students are actively engaged in the daily activities of the preschool. They are supported in initiating appropriate conversations with the preschool children and assuming an active role in their play. Students are expected to follow shop rules and safety practices as outlined by the preschool and State guidelines.

## EC2 Grade 10 Shop <br> 30.0 credits

Students are introduced to planning and implementing daily activities under the supervision of head teachers. The sophomore curriculum includes lesson planning, introduction to careers in Early Childhood Education, and the physical, intellectual, emotional and social development of preschool aged children. Students learn how to appropriately talk to children and impart age appropriate behavior management techniques. Grade 10 ECE students gain an understanding of the importance of learning through play in all areas of the preschool curriculum and develop teamwork skills by working closely with Grade 12 students. Students will also prepare to become OSHA certified by the end of their sophomore year.

## EC2R Grade 10 Related 6.0 credits

Students gain knowledge of the needs of various ages and learn how to supervise young children. Students learn how to determine socially acceptable behavior and handle negative behaviors as well as the signs of child abuse and neglect. Furthermore, students become familiar with age appropriate curriculum planning and implementation, explore the value of play in the preschool setting and become involved in daily activities by extending play.

## EC3 Grade 11 Shop

## 36.0 credits

Students plan, implement, and direct weekly thematic based units. Students also work on bulletin boards, children's portfolios and end of the year preschool evaluations.

## EC3R Grade 11 Related

## 6.0 credits

Students explore the field of early childhood education through understanding the traits of a quality child care program. They become aware of the characteristics that make up a competent child care professional and learn what is required to operate a child care center effectively. Furthermore, students learn how to set up an appropriate environment for children to learn and understand and implement health and safety practices. Emphasis is placed on organizing and implementing an early learning program and starting their Junior/Senior Project.

In the Senior year, students put into practice their early education and care competencies by overseeing the preschool program. Seniors, while supervised by their instructors, manage the daily activities of the preschoolers. If eligible, students participate in externship programs in early childhood centers in the community. When students are eligible, they are able to work towards the Early Education and Care Infant/Toddler Teacher certification.

## EC4R Grade 12 Related

## 6.0 credits

Students spend senior year researching the state mandated child care regulations. Additionally, students work to complete their Junior/Senior Project, and build a resume with letters of recommendation.

## ELECTRICAL

Students in the Northeast Electrical program will become proficient in electrical wiring, hardware installation and the repair of electrical and related equipment. In addition, the students will become familiar with circuit design, blueprint reading, and the laws and regulations pertaining to the electrical field. Students enrolled in the Electrical program will learn the proper use of hand tools, power tools, hydraulic tools, taps/dies, grinders, and heat tools for bending poly vinyl chloride conduit. They are introduced to a wide range of specialized wiring within the electrical industry such as fire alarm systems, burglar alarms, signal circuits, television, communications circuits and boilers.

Students who enrolled in the Electrical program must successfully complete the fundamentals of the electrical curriculum from their sophomore to senior year. The course introduces students to electrical concepts and theories. Upon successful completion of the fundamentals of the electrical course, the students will focus on electrical theory, the National / Massachusetts Electrical Codes, specialty circuits drawing, and mathematics related to the electrical field.

## CAREER OPPORTUNITIES:

Upon graduation, students are employable as:

Electrician<br>Electrical Apprentice<br>Electrical Power-line Installer and Repairer<br>Lineman<br>Electrical Warehouse Supplier<br>Telecommunications<br>Data Communication Specialist

# ELECTRICAL GRADUATES HAVE BEEN EMPLOYED AT THE FOLLOWING COMPANIES OR AGENCIES: 

Eversource, Boston, MA
Joy Electric, Quincy, MA
Mass Electric, Boston, MA
Ducom Electric, Wilmington, MA
All Tech Electric

Interstate Electric, Burlington, MA
Dodge Electric, Stoneham, MA
IBEW Local 103
Tocco Electric, Winchester, MA
Suburban Electric

## COLLEGE ARTICULATION AGREEMENTS:

See the NEMT Tech Prep Programs section on the school website (www.northeastmetrotech.com)

## LICENSES, CERTIFICATIONS, AND AFFILIATIONS:

The graduate moves upward in the Commonwealth of Massachusetts Electrical license tier system through the accumulation of 1800 working/ 375 classroom hours.

OSHA 10-hour Occupational Health and Safety Construction Industry Training

## Course of Study

## Electrical

## ELX

Grade 9 Exploratory
2.0 credits

The Ninth grade exploratory program is an introduction to the electrical shop and trade. Students learn shop and hand tool safety. A series of projects designed to mimic common home wiring gives the student a chance to use some of the trade tools and learn with a hands-on approach to basic residential wiring.

## ELXF-16 Grade 9 Shop

## 6.0 credits

This $9^{\text {th }}$ grade program is the start of the student's apprentice training. Students will start the learning process with an introduction to the foundations of the electrical field receiving detailed instruction of safety and tool protocols.

## EL2

Grade 10 Shop
36.0 credits

The tenth grade shop program is a basic introduction to proper use of tools, safety precautions and wiring methods, including but not limited to bell wiring, non-metallic sheathed cable, armored cable, surface metal raceway, electric metallic tubing, and ridge metal conduit wiring methods.

Related and theory training for all grades includes review and mastery of Electrical safety practices, the National Electrical Codes, the Massachusetts Electrical Code, blue print reading, electrical math, science, circuit drawing and electrical theory to correspond with their grade level.

## EL3 Grade 11 Shop

## 36.0 credits

The Grade 11 program is structured to include wiring methods consisting of PVC bending, installation and residential services. As with all grade level curriculums, safety and proper use of all tools is reinforced. Eligible students may participate in community based job site activities under the supervision of Northeast instructors.

## EL3R Grade 11 Related 6.0 credits

Related and theory training for all grades include Electrical safety practices, the National Electrical Codes, the Massachusetts Electrical Code, blueprint reading, electrical math, science, circuit drawing and electrical theory to correspond with their grade level.

## EL4 Grade 12 Shop

36.0 credits

At this level students learn to trouble-shoot, trace electrical wiring, circuitry and motor control wiring in the shop. Students utilize their safety training of power tools, ladders, pipe bending and wiring skills during new installations within the school and offsite at community based work sites supervised by Northeast instructors. Network and communication wiring is also learned at this level.

## EL4R Grade 12 Related 6.0 credits

Related and theory training for all grades include Electrical safety practices, the National Electrical Codes, the Massachusetts Electrical Code, blueprint reading, electrical math, science, circuit drawing and electrical theory to correspond with their grade level.

## Health AssistING

Healthcare is one of the fastest growing industries in the US with a demand for multi-skilled health occupation employees. To meet this challenge, students in the Northeast Health Assistant program study the therapeutic, diagnostic, and administrative areas of the health professions with an emphasis on Nurse Assisting and Medical Office Assisting. Students are given theoretical and practical instruction in the laboratory and clinical experience in area healthcare facilities. The rigorous curriculum is aligned with the standards and requirements of the Department of Public Health and the MA DESE frameworks.

Medical related sciences are integrated into the Health Assistant curriculum. These include anatomy and physiology, nutrition, and biology. Medical Terminology, Introduction to Electrocardiography, Introduction to Phlebotomy and a thirty hour Home Care Aide course are taught during the student's Health Assisting career.

The students are prepared to test for the Massachusetts Department of Public Health certification exam for Nurse Assistants. Many Health Assisting students pursue post-secondary education to continue their education in Nursing or Allied Health.

## CAREER OPPORTUNITIES:

Employment opportunities post-graduation:

Certified Nurse Assistant
Medical Assistant

Home Health Aide
Dietary Aide

## GRADUATES HAVE BEEN EMPLOYED BY THE FOLLOWING FACILITIES:

Brigham and Women's Hospital
Chelsea Soldier's Home Boston Medical Center East Boston Health Center Burlington Eye Associates Bear Hill Nursing Home

Mass. General Hospital
Wingate Nursing Center
Prospect House
Sunrise Healthcare
Cambridge Health Alliance

## COLLEGE ARTICULATION AGREEMENTS:

See the NEMT Tech Prep Programs section on the school website (www.northeastmetrotech.com)

## LICENSES AND CERTIFICATIONS:

American Heart Association BLS, CPR and AED

American Red Cross First Aid/CPR/AED
Certified Nurse Assistant (CNA)
Home Health Aide (HHA)
OSHA 10-hour Occupational Health and Safety General Industry Training

## Course of Study

## Health Assisting

## HAX Grade 9 Exploratory

## 2.0 credits

The Health Assistant program offers the exploratory student an overview of healthcare professions and the various occupations available in the field. The students are taught safety in the healthcare environment, CPR, first aid, infection control, basic anatomy and physiology, and nutrition. Freshmen participate in a visit to a local Geriatric Adult Day Health Center. Freshman students in Health Assisting study medical math. Medical math is a competence necessary to be successful as a healthcare employee. The curriculum helps prepare the student for the MCAS exam.

## HAXF-16 Grade 9 Shop

## 6.0 credits

Freshman students begin their Health Assistant course of studies in the fourth quarter. The goal for the students in the ninth grade is the attainment of introductory knowledge and pre-care skills necessary to begin the Nurse Aide curriculum. The students volunteer one day each week at an Adult Day Health Center. The Health Assistant curriculum includes roles and responsibilities of the healthcare worker, introduction to nutrition, introduction to geriatrics and understanding dementia. Freshman students complete the ten hour OSHA certification on-line course.

Freshman students are introduced to the language of medicine and their three year sequential course of medical terminology. Students begin studying the basic structure of the human body.

## HA2 Grade 10 Shop <br> 36.0 credits

The tenth grade students begin the Nurse Aide curriculum and work in the skills lab, the clinical setting and the classroom. The students are immersed in a course of studies which includes Fundamentals of Nurse Assisting, Medical Office Administration, Therapeutic Nutrition, Gerontology, First Aide and computer skills. The students acquire nurse assisting clinical skills through practice in the nursing laboratory and a supervised internship at Wingate Long Term Care Facility.

## HA2R Grade 10 Related <br> 6.0 credits

Medical Terminology is a three year sequential course taught in Health Assisting. The course is designed to give the student the knowledge of medical language. Competency in medical terminology is a necessary skill for employment in the healthcare profession. This is an anatomy and physiology systems based course.

During the sophomore year, students study the structure and function of the human body, medical abbreviations, medical word roots, prefixes and suffixes. Students are taught the anatomy and physiology, diagnostic, therapeutic and pathology terms of the special senses, reproductive and integumentary systems.

Junior students participate in a one semester rigorous nurse aide training and review course which includes a lab component. Students apply their skills in the clinical area at Chelsea Soldier's Home and Glen Ridge Nursing Care Center. Students are under the direct supervision of a Registered Nurse instructor. Upon successful completion of the Nurse Assistant course, the student is eligible to take the Massachusetts Certification Exam to be licensed as a Certified Nurse Assistant and placed on the Department of Public Health's Registry of licensed CNA' s.

The junior student also participates in a one semester Medical Office Assistant course. Administrative skills and clinical procedures are practiced in the lab and developed in the clinical setting at East Boston Neighborhood Health Center. During the eleventh grade the students also study Introduction to Electrocardiography, and are certified in American Heart Association CPR/AED. Students who successfully complete the Nurse Aide course with a B average are eligible for college credits through our articulation agreement with local community colleges.

## HA3R Grade 11 Related

6.0 credits

During the second year of medical terminology, junior students study the anatomy and physiology, diagnostic, therapeutic and pathology terms of the cardiac, muscular, skeletal and urinary systems.

Students begin their research for the Junior/Senior Project graduation requirement.

## HA4 Grade 12 Shop

## 36.0 credits

Seniors in the Health Assistant program participate in a supervised clinical internship three days a week at Whidden Hospital where they develop advanced nurse assisting skills. The students study pathology and treatment of the patient in acute care. Students complete a Home Health Aide course, an Introduction to Phlebotomy course and the NEFE financial curriculum. Senior students in Health Assisting, if eligible, may participate in the Cooperative Education program.

## HA4R Grade 12 Related <br> 6.0 credits

During the third year of Medical Terminology, senior students study the anatomy and physiology, diagnostic, therapeutic and pathology terms of the respiratory, digestive, endocrine and nervous systems. Students work throughout the year researching and completing the Senior Project. Students who maintain an overall B average for the three year course are eligible for three credits from North Shore Community College through the Health Assisting articulation program with the college.

## HEATING, VENTILATION AND AIR CONDITIONING/REFRIGERATION

The Northeast Heating, Ventilation, Air Conditioning / Refrigeration program teaches the skills essential to the entry-level technician. The HVAC/R program incorporates a blend of interactive lectures and hands-on laboratory exercises to develop meaningful knowledge and skills that students can put to immediate use on the job. Small class size ensures a free flow exchange of real world experiences with state of the art products and emerging theories. Hands on sessions in our fully equipped lab allow students to hone their operating and troubleshooting skills.

## CAREER OPPORTUNITIES:

Upon graduation, students are employable as:
Air Conditioning Service Technician
Commercial Service Technician
HVAC Mechanic/Technician
Oil Burner Installer/Mechanic/Technician
Refrigeration Technician

## HEATING, VENTILATION AND AIR CONDITIONING/REFRIGERATION GRADUATES HAVE BEEN EMPLOYED BY THE FOLLOWING COMPANIES:

Brooks and Brooks HVAC
Better Comfort Systems HVAC
SG Torrice HVAC
National Mechanical Service HVAC
Excel Mechanical Service HVAC

## COLLEGE ARTICULATION AGREEMENTS:

See the NEMT Tech Prep Programs section on the school website (www.northeastmetrotech.com)

# LICENSES, CERTIFICATIONS, AND AFFILIATIONS: 

EPA 608/609 Refrigerant Certifications
R410 Refrigerant Certification (ESCO)
OSHA 10-hour Occupational Health and Safety Construction Industry Training

## Course of Study

## Heating, Ventilation and Air Conditioning/Refrigeration

HVX Grade 9 Exploratory 2.0 credits

The HVAC/R Exploratory Program is designed as a one week overview of the several disciplines within this trade. Students will explore the many career opportunities in the Heating, Ventilation, and Air Conditioning, and Refrigeration fields.

## HVXF-16 Grade 9 shop <br> 6.0 credits

Grade 9 students will be taught: Safety in the Shop, Refrigeration Fundamentals, Compressors, System Components, Basic Piping, Basic Electricity, Test Equipment \& Methods, and Refrigerators

## HV2 Grade 10 Shop $\mathbf{3 0 . 0}$ credits

Grade 10 students will develop skills in Residential Energy Systems, New Construction, Building Envelope, Ventilation, Window Units, Motor Controls and Drives, Five Wire Thermostats and Blueprint Reading.

## HV2R Grade 10 Related 6.0 credits

The purpose of this course is to prepare the HVAC/R student with the knowledge of theoretical background that applies to the basic principles of the industry. The course of instruction will provide a sound basis for the student to gain the necessary entry level skills. In the sequence of courses, this course is the first in a sequence of three. Students will be introduced to the following topics: Tools and Equipment, Tubing and Piping, Heat, Theory, Refrigeration and Refrigerants, OSHA, Domestic Refrigeration and Electrical Controls.

## HV3 Grade 11 Shop

## 36.0 credits

Grade 11 students will develop skills in: Commercial Refrigeration, Advance Controls, Split Systems, Water Chillers, Reclaiming and Recovery License, Water Towers, Pneumatic Controls, Automotive AC License, and Solar Energy.

HV2R Grade 11 Related 6.0 credits

The purpose of this course is to prepare the HVAC/R student with the knowledge of theoretical backgrounds that applies to the Refrigeration / Air-conditioning aspect of the industry. In the sequence of courses this is the second of the three courses. Students will be introduced to the following topics: 608 Federal Clean Air Act, Junior/Senior Project and Refrigeration System Components, (condensers, metering devices, evaporators, multiple evaporators, pressure switches, compressors, electrical controls, thermostats, etc.).

Grade 12 students will develop skills in Steam and Hot Water Boilers, Oil Burners, Oil Storage and Distribution, Boiler Water Chemistry, Gas and Oil Furnaces, Heat and Cooling Load Calculation, Prep for State Oil and Burner Licensing.

## HV4R Grade 12 Related <br> 6.0 credits

The purpose of this course is to prepare the HVAC/R student with the knowledge of theoretical background that applies to the heating aspect of the industry. In the sequence of courses, this course is the third of three. Students will be introduced to the following topics: 410A Refrigerant, Heat Pumps, Gas and Oil Heating, Calculating Heat Loads, (all in the light commercial and residential areas.)

## METAL FABRICATION

The Northeast Metal Fabrication program is registered with the AWS as an Educational Institution Member and participates in the AWS S.E.N.S.E. (Schools Excelling through National Skill Standards Education) program. Students learn a variety of welding and cutting processes including: Shielded Metal Arc; Gas Tungsten Arc; Flux Cored Arc; standard and dual shield; Gas Metal Arc; Gas Welding. Cutting processes that are taught include: Carbon Arc; Plasma Arc; Flame cutting. As part of the program, students will learn to use state-of-the-art power equipment: shears; bending brakes; rollers; saws; a variety of bench and hand tools.

Shop-related classroom activities include, but are not limited to safe practices; shop math; basic electricity; blueprint reading; weld-symbol identification; and weld theory; as well as career related writing and communication skills. Additionally, students are given 10 hours of OSHA training and receive an OSHA safety certificate upon successful completion of the exam. The shop and related curriculum are correlated and exceed AWS recommendations. Students who complete the training program pass seven workmanship qualification tests using a variety of welding and cutting processes, pass two welder certification tests, and achieve a minimum score of 70 on the written examination, will be issued a national certificate from the AWS.

## CAREER OPPORTUNITIES:

Upon graduation, students are employable as:

Body Welders
Spot Welders
Structural Steel Welders
Underwater Welders
Metal Fabricator

Pipefitter
Welder

## COLLEGE ARTICULATION AGREEMENTS:

See the NEMT Tech Prep Programs section on the school website (www.northeastmetrotech.com)

## LICENSES, CERTIFICATIONS, AND AFFILIATIONS:

American Welding Society (AWS) Welder Certificate<br>OSHA 10-hour Occupational Health and Safety Construction Industry Training

## Course of Study

## Metal Fabrication

## MFX Grade 9 Exploratory $\quad 2.0$ credits

Grade 9 exploratory students will be introduced to trade orientation; personal and shop safety; basic shielded metal arc welding; and ornamental fabrication.

## MFXF-16 Grade 9 Shop 6.0 credits

Students will continue to study personal and shop safety; basic shielded metal arc welding and ornamental fabrication. The students will also be introduced to shop math, the ruler, basic metal arc welding and oxyacetylene welding and cutting

## MF2 Grade 10 Shop <br> 30.0 credits

Grade 10 students learn welding shop safety as it relates to newly introduced topics and competencies including but not limited to oxyacetylene (welding ,brazing and cutting ), shielded metal arc welding, layout and fixtures, hand rolling, hand tools, material handling, power shear, powered ironworker, and gas metal arc welding.

## MF2R Grade 10 Related 6.0 credits

During the Grade 10 related course, students continue to study Oxyacetylene Welding and Shield Metal Arc with nationally recognized Hobart materials including safety precautions for oxyacetylene welding and cutting and shield metal arc, in conjunction with AWS SENSE Workmanship Qualification standards, Destructive testing using AWS standard bend testing, and Destructive testing using AWS standard break testing. The students will also prepare for successful completion of the OSHA 10 hour construction program certification.

## MF3

Grade 11 Shop
36.0 credits

Grade 11 students will continue to learn welding shop safety as they experience lessons in Gas tungsten arc welding (steel, stainless and aluminum). Students will develop skills with Basic and CNC brake operations, powered rollers, cut off milling, plasma arc cutting, carbon arc cutting, advance metal forming, metal finishing, OSHA certification, and fabricating projects from blueprints. Understanding and compliance with welding code is emphasized.

Grade 11 students study: Shielded Metal Arc Welding Advanced \#2 and continue all position welding. Instruction in surfacing of steel, macro etching welds, guided bend-testing welds, Gas Tungsten Arc Welding is provided. Fundamentals of application, all position welding practice on mild steel, all position welding practice on aluminum is also addressed. The students will also be introduced to the plasma cam and will begin their work on the Junior/Senior Project.

## MF4 Grade 12 Shop

## 36.0 credits

Grade 12 students will learn flux core arc welding, dual shield welding, basic metallurgy; testing and inspecting methods and procedures, hard facing, pipe welding (up and down), pipe fitting layout, CNC plasma cutting, portable welding, and structural and maintenance welding. Grade 12 students will strive for completion of the AWS S.E.N.S.E. program requirements.

## MF4R Grade 12 Related

## 6.0 credits

Highlights of the Grade 12 related curriculum includes a review and expansion of safety procedures and health precautions, as well as information on all position welding using dual shield, Air Carbon Arc Cutting and Gouging, The students complete work on their Junior/Senior Projects culminating in an oral presentation.

## PLUMBING AND PIPEFITTING

Plumbers are highly skilled, licensed craft persons who perform the design, layout and installation of water supply, sanitary drainage and hydronic heating systems. Learning activities for students include installation practices, science of the trade, blueprint reading, code compliance, cost profiles and business practices for both plumbing and pipefitting. Students are taught to use a variety of hand and power tools, culminating in the extensive participation in the community based work projects, the student house building program and/or the Cooperative education program (when eligible and available). Graduating students receive hours accumulated through the program towards Massachusetts licensing requirements.

## CAREER OPPORTUNITIES:

Upon graduation, students are employable as:
Plumber
Pipefitter
Steamfitter
Pipelayer

## PLUMBING AND PIPEFITTING GRADUATES HAVE BEEN EMPLOYED BY THE FOLLOWING COMPANIES:

Cummings Properties, Woburn, MA
F.W. Webb

Heritage Heating \& Plumbing, Stoneham, MA
Local 12 Boston Plumbers Union, Boston, MA
Seaver Plumbing \& Heating, Woburn, MA
Hackett Bros. Plumbing \& Heating, Lynn, MA
Kennedy Mechanical, Inc., Woburn, MA
Houghton Plumbing \& Heating, Stoneham, MA

## COLLEGE ARTICULATION AGREEMENTS:

See the NEMT Tech Prep Programs section on the school website (www.northeastmetrotech.com)

## LICENSES, CERTIFICATIONS, AND AFFILIATIONS:

The graduate moves upward in the Commonwealth of Massachusetts Plumbers license tier system through the accumulation of 1700 working/ 330 classroom hours.

Corzan FlowGuard Godl Pipe and Fitting Certification
VIEGA National Certificate: ProPress and PEX Training
OSHA 10-hour Occupational Health and Safety Construction Industry Training

## Course of Study

## Plumbing and Pipefitting

## PLX Grade 9 Exploratory <br> 2.0 credits

Grade 9 students will explore topics including safe use of tools and equipment during an introduction to plastic pipe and fittings, copper pipe and fittings and cast iron pipe and fittings. Drain waste and vent systems along with the water distribution systems will also be reviewed.

## PLXF-16 Grade 9 Shop 6.0 credits

The Grade 9 course is designed to introduce and orient the student to the plumbing field by performing tasks that a person would experience in the Plumbing field. Students also participate in an introduction to the concepts covered in the 10 hour of OSHA certification examination.

Grade 10 students' instruction begins with shop safety instructions and lessons in the proper use of tools. Topics to follow include introduction to plumbing blueprints; installing and testing drainage waste and vent piping; installation and testing of water supply piping and installing water heaters and fuel gas systems.

## PL2R Grade 10 Related 6.0 credits

The purpose of this course is to prepare students for attainment of a license in the plumbing field. Students will study plumbing theory including science, safety, mathematics, and plumbing code compliance.

## PL3 Grade 11 Shop

36.0 credits

Grade 11 students will continue to master safety protocols and procedure while being introduced to residential hydronic heating. Eligible students may participate in off-site projects including the house building program (when available). Students may also be assigned to various shop projects and maintenance projects within the building.

## PL3R Grade 11 Related 6.0 credits

Eleventh Grade students will learn various methods of installation used in today's industry. Students will assemble drainage, water, and gas supply systems as prescribed by the Massachusetts State Code.

## PL4 Grade 12 Shop

36.0 credits

Grade 12 students will continue to learn advanced shop safety and proper use of tools. Students will continue progression to advanced areas of the plumbing and heating industry. The offsite Cooperative Education Program may be available to eligible students.

## PL4R Grade 12 Related <br> 6.0 credits

Grade 12 students will learn how to sketch and read mechanical drawings and will design plumbing systems applying all of the competencies learned in tenth and eleventh grades. Grade 12 students will also complete requirements consistent with the Junior/Senior Project

## Robotics and Automation

Robotics and Automation Technology is growing profession which combines components of engineering (mechanical \& electrical), computer science and programming. There is an emphasis on problem solving in the design, debugging, and troubleshooting of systems. Students learn Computer Aided Design Drawing (CAD) as well as rapid prototyping through 3-D printing. The program includes hands-on and theoretical curriculum that covers analog and digital control electronics. Also included are Programmable Logic Controllers (PLCs) and their use in automation and manufacturing.

This curriculum incorporates elements and principles of mathematics, physics and chemistry as they apply to the design and operation of electromechanical systems. Robotic systems are
utilized for many applications in manufacturing and assembly, defense, space and underwater exploration, and the constantly changing service applications. Students will have the opportunity to compete in numerous SkillsUSA District, State and National competitions while progressing through this program.

Career opportunities in Robotics and Automation continue to play an increasing role in manufacturing and the manufacturing industry trained professionals who can improve processes, design and develop new machines and products, and manage repairs and operations.

Students completing this program will have a strong background preparing them to go on to college for an engineering degree or move on to a career as a technician.

## CAREER OPPORTUNITIES:

Upon graduation, students are employable as:
Robotics Technicians
Industrial Automation Maintenance Technicians
Field Service Technicians
Plant Maintenance Technicians
Electronics Assembly Technicians

## ROBOTICS AND AUTOMATION GRADUATES HAVE BEEN EMPLOYED BY THE FOLLOWING COMPANIES:

This is a new program (2017-2018). The Class of 2020 will be the first graduates.

## COLLEGE ARTICULATION AGREEMENTS:

See the NEMT Tech Prep Programs section on the school website (www.northeastmetrotech.com)

## LICENSES, CERTIFICATIONS, AND AFFILIATIONS:

Fanuc Robotics<br>Yaskawa Motoman Robotics<br>SMC Mechatronics<br>OSHA 10-hour Occupational Health and Safety Construction Industry Training

## Course of Study

## Robotics and Automation

## RAX Grade 9 Exploratory

## 2.0 credits

Grade 9 students are introduced to the Robotics and Automation field and its many career opportunities. Basic electrical concepts and circuits are introduced and demonstrated in the shop. Through the hands-on construction of simple electronic projects, microcontrollers and educational robots, students learn proper hand tool use. Students also perform activities and exercises exposing them to computer programming and robotic fundamentals.

## RAXF Grade 9 Shop <br> 6.0 credits

Grade 9 students continue with basic electrical concepts and circuits after the shop has been chosen. Students continue to perform activities and exercises using computer and robotic fundamentals. OSHA safety certification is performed and safe operating practices in shop are discussed in detail.

## RA2 Grade 10 Shop

30.0 credits

Grade 10 students cover AC/DC electronic circuits and components, including the use of Ohm's Law, Watt's Law, and Kirchhoff's Laws and network theorems in the study of series, parallel, series/parallel and voltage divider circuits. Study continues through the more advanced topics of $A C / D C$ electronics, including the use of such components as capacitors, resistors, transistors, diodes, inductors and LED's. Students are also introduced to integrated circuits such as the 555 timer and 4017 decade counter. Students will be introduced to mechanical concepts and fluid power.

## RA2R Grade 10 Related <br> 6.0 credits

Grade 10 students are introduced to industrial DC circuits and components while learning the proper industrial wiring and layout techniques. Use of proper hand tooling and electronic test equipment is taught for troubleshooting skills. Combining their knowledge of discrete electronic components, and integrated circuits, projects are wired and completed using breadboarding techniques. Students learn to program a PLC (programmable logic controller) and apply the program to real world simulation exercises. Student will also build projects using proper fabrication and soldering techniques.

## RA3 Grade 11 Shop

36.0 credits

Grade 11 students build upon their knowledge of both semiconductor and digital components and circuits. Projects are chosen to enable student proficiency in the construction and trouble-shooting of digital and analog circuits. Students will design, layout and fabricate their own printed circuit boards. Students will work in the robotics and mechatronics areas through use of actual factory trainers by constructing real world scenarios using PLC programming combined with electric pneumatic and hydraulic power.

## RA3R Grade 11 Related <br> 6.0 credits

Grade 11 students move from the introduction to basic semiconductor devices and digital concepts to more advanced circuits. The students spend time on semiconductor devices and circuits, including the study of diodes, LEDs, bipolar junction transistor BJTs, field effect, transistor FETs, operational amplifiers and rectifiers. Students discover how these devices are used in power supplies, voltage regulators, small and large signal amplifiers, oscillators and control circuits. Another focus is digital devices and circuits, ranging from binary and hexadecimal numbering systems and basic gates to more advanced devices and
circuits such as flip-flops, shift registers, and binary counters. Truth tables, timing diagrams, Boolean algebra and Karnaugh Maps will be used in analyzing of digital circuits. Students are also introduced to Microprocessors, microcontrollers, and programmable logic devices. Students will learn fluid power such as pneumatics and hydraulics.

## RA4 <br> Grade 12 Shop

36.0 credits

Grade 12 students become more proficient in projects covering advanced semiconductors and digital electronics. Advanced manufacturing scenarios using PLCs, mechatronics trainers, and industrial robots. The knowledge gained throughout previous courses will be used to complete projects to industry standards. Students who are eligible for co-op spend their shop weeks gaining valuable on-the-job training at various manufacturing firms.

## RA4R Grade 12 Related 6.0 credits

Grade 12 students continue the study of the semiconductors and digital electronics started in Junior year. Advanced semiconductor topics in the areas of amplifiers, oscillators, and switching and control circuits are studied. Students get more involved with microcontrollers, programmable logic devices and advanced topics in industrial automation. Students will continue with the study of mechanical concepts. Students prepare for careers by learning employability skills, automation career, and portfolio/resume preparation.

# NORTHEAST METROPOLITAN REGIONAL VOCATIONAL SCHOOL ADMISSION POLICY 2024-2025 

## I. ADMISSIONS

An admission process is necessary in vocational technical schools where space is a limiting factor. Vocational technical programs and instructional spaces are designed and equipped to serve a specific maximum number of students safely. As a result, Northeast Metropolitan Regional Vocational High School may lack both the space and flexibility to accommodate all interested applicants. Therefore, a selection process is necessary to determine which applicants are admitted to the school each year. All applicants to grades nine through twelve at Northeast Metropolitan Regional Vocational High School will be evaluated using the criteria contained in this Admission Policy. Northeast Metropolitan Regional Vocational Technical District School Committee approved this policy on September 15, 2023, and will review and approve this policy annually. The Northeast Metropolitan Regional Vocational High School Admission Policy is on file at the Department of Elementary and Secondary Education.

## II. EQUAL EDUCATIONAL OPPORTUNITY

Northeast Metropolitan Regional Vocational High School (herein referred to as "Northeast Metro Tech") admits students and makes available to them its advantages, privileges and courses of study without regard to race, color, gender, gender identity, religion, national origin, sexual orientation or disability.

Northeast Metro Tech has an on-line application that is adaptable to languages other than English. If there is a student with limited English proficiency, a qualified representative from Northeast Metro Tech will assist the applicant in completing the necessary forms and assist in interpreting during the entire application and admission process upon the request of the applicant. Please contact our Admissions office at 781-246-0810 ext. 1302 or neadmissions@northeastmetrotech.com if you have questions or need help filling out the application form.

Students with disabilities may voluntarily self-identify for the purpose of requesting reasonable accommodations during the entire application and admission process.

Information on limited English proficiency and disability submitted voluntarily by the applicant, for the purpose of receiving assistance and accommodations during the entire application and admission process, will not affect their admission to the school.

Northeast Metro Tech is committed to providing educational opportunities to students experiencing homelessness or in foster care. Students who are homeless will be accepted according to the selection criteria contained in this admission policy. Please contact Northeast Metro Tech's liaison at tobrien@northeastmetrotech.com , (781)246-0810, or 100 Hemlock Road, Wakefield, MA 02180 with any questions.

Consistent with Massachusetts regulations, Northeast Metro Tech has created a plan with "deliberate, specific strategies to promote equal educational opportunities and attract, enroll, and retain a student
population that, when compared to students in similar grades in sending districts, has a comparable academic and demographic profile." Each year Northeast Metro Tech will:

1. Provide community outreach in our sending communities, where families feel most comfortable, in order to educate residents of the opportunities and offerings at Northeast Metro Tech and assist students/families complete the application process.
a. Host the district's Annual Open House and provide multilingual staff to directly assist with application completion.
b. Presentations to all district students at their middle schools.
c. Host individual and group tours at Northeast Metro Tech High School.
d. Provide ELL recruitment coordinator to assist in the admissions process for the ELL students throughout the district
e. Work collaboratively to provide education and assistance through partnerships with community-based agencies and organizations.
f. Increase marketing and visibility through social media, radio, television, direct mailing to families, and strategically placed informational materials
2. Improve identification of and support for students/families who require assistance with the application process due to language barriers.
a. Go2CTE has included additional optional application questions to help districts identify students/families whose first language is not English and who may require assistance with the application process.
b. Go2CTE has improved the admissions platform to include a more prominent 'Language Translation' icon on the front page for students/families to have the application translated into any language; and/or
3. Collaborate with our sending middle schools to improve their knowledge and understanding of the admissions process and educational (academic and CVTE) programming and expectations.
a. Host an annual Middle School Admissions Breakfast for sending school representatives; including counselors, special education facilitators, ELL liaisons, etc.)
b. Northeast Metro Tech is actively working with member districts to have the Admissions Counselor presentations be allowed during the school day at each middle school. Middle schools that do not allow the admissions presentation during the school day prevent students from accessing information regarding career technical education opportunities available and prevent access to such. Ensuring all students have equitable access to information regarding career technical educational opportunities is a key component of the collaborative work with the 12 cities and towns in the Northeast Metro Tech district.
c. Offer tours for students, families and staff from our twelve ending districts.
d. Offer technical assistance to our sending school districts regarding the use of the Go2CTE admissions platform.
4. Adjust admissions criteria and the scoring rubric in order to ensure the use any criteria does not have the effect of disproportionately excluding persons of a particular race, color, national origin, sex, gender identity, sexual orientation, religion, or disability (more commonly referred to as a "disparate impact"); unless the criteria demonstrate that (1) such criteria have been validated as essential to participation in career technical programs; and (2) alternative equally valid criteria that do not have such a disproportionate adverse effect are unavailable.

## III. ELIGIBILITY

Resident Applicants: Any eighth or ninth grade student who is a resident of the Northeast Metro Tech District (Chelsea, Malden, Melrose, North Reading, Reading, Revere, Saugus, Stoneham, Wakefield, Winchester, Winthrop, and Woburn) who expects to be promoted by the sending district to the grade they seek to enter is eligible to apply for fall admission to Northeast Metro Tech. Students may only be admitted to Northeast Metro Tech if they have been promoted to the grade they are seeking to enter, so students should be aware that their admission is conditional-if they are not ultimately promoted to enter the grade they have applied for, their admission will be rescinded. Residents of the Northeast Metro Tech School District who meet the minimum admission requirements are admitted before any non-residents seeking the same program. Resident students will be evaluated using the criteria contained in this Admission Policy. Priority for admission is given to Northeast Metro Tech district residents, according to the District Agreement, which identifies the cities and towns that are members of the District, and explains how those cities and towns allocate seats to their residents.

Grade 9 applicants seeking admission for grade 10 will be admitted based on space availability and will be notified of admission status by August 1st.

Grade 10 applicants - Northeast Metro Tech has some career and technical programs that may be started in their junior year if space is available. Any grade 10 student who is a resident of the Northeast Metro Tech District (Chelsea, Malden, Melrose, North Reading, Reading, Revere, Saugus, Stoneham, Wakefield, Winchester, Winthrop, and Woburn) may apply. Space is extremely limited for these applicants.

## Apportionment:

The Northeast Metropolitan Regional Vocational School District governs the admission of the district residents according to regional agreement in place that identifies the cities and towns that are members of the region and how the cities and towns allocate the seats to their resident districts. The number of seats in the ninth grade class for each member community is calculated annually according to the ratio of that town's current grade 9-12 enrollment (private and public) as compared to the total grade 9-12 enrollment in the twelve community member districts. The enrollment ratio is applied to the total number of seats to determine each member town's quota. In the event that the prospective enrollment on May 1 of
any year of qualified candidates from any member municipality is less than its quota, the seats shall be redistributed using the same formula.

Non-residents Applicants: Students who are not residents of the Northeast Metro Tech District (non-resident students) are eligible to apply for fall admission or admission during the school year, subject to the availability of openings to Northeast Metro Tech, provided they expect to be promoted by their local district to the grade they seek to enter. Non-resident applicants will be evaluated using the criteria contained in this Admission Policy. Non-resident students and families can find information on the Chapter 74 Nonresident Student Tuition Program online. Please be aware that residents of the Northeast Metro Tech District who meet the minimum admission requirements will be admitted before any non-residents seeking the same program.

Homeschooled Applicants: Students presently being formally home schooled may apply for admission to Northeast Metro Tech. Home schooled applicants will be subject to the same admissions standards as other applicants. The Home Schooled student's parent or guardian must submit a copy of the Home

School approval letter from the sending district's superintendent; and if grades are not available, a portfolio or representative student's body of work in English, math, science and social studies.

Transfer Students: Transfer students from other career technical schools are eligible to apply for fall admission or admission during the school year to grades 9-12 at Northeast Metro Tech provided they expect to be promoted to the grade they seek to enter by their current school. Transfer students will be evaluated using the criteria contained in this Admission Policy. Applications from students who are enrolled in a state-approved (Chapter 74) career technical education program in another school (transfer students) will be considered for admission (including admission during the school year) on a space available basis. Their applications will be evaluated according to the provisions of this Admission Policy.

School Choice Applicants: Northeast Metro Tech does not participate in school choice.

## IV. Organizational Structure

Northeast Metro Tech is a public regional career technical school located in Wakefield, Massachusetts. Northeast Metropolitan Regional Vocational High School (Northeast Metro Tech) is accredited by the New England Association of Schools and Colleges. Northeast Metro Tech is committed to providing quality career technical and academic programs.

The Superintendent/Director of Northeast Metropolitan Regional Vocational School District is:
David DiBarri ddibarri@northeastmetrotech.com (781) 246-0810
The Assistant Superintendent/Deputy Director at Northeast Metropolitan Regional Vocational School District is:

Tracey O'Brien tobrien@northeastmetrotech.com (781) 246-0810
The Principal of Northeast Metropolitan Regional Vocational High School is:
Carla Scuzzarella cscuzzarella@northeastmetrotech.com (781) 246-0810

It is the responsibility of the Northeast Metro Tech Superintendent-Director to supervise the administration of the policies and procedures required to admit and enroll students, consistent with all applicable laws, regulations, and guidance. Northeast Metro Tech has an Admissions Committee appointed by the Superintendent-Director. The committee consists of members of the Administration, Student Services, and Special Education.

Responsibilities of the Admissions Committee include:
A. development and implementation of admission procedures
B. processing of applications
C. ranking of students
D. acceptance of students according to the procedure and criteria in the admission policy
E. establishment and maintenance of a waiting list of candidates

The Northeast Metro Tech Recruitment Coordinator, Bilingual Recruitment Coordinator, and Admissions Administrative Assistant are responsible for disseminating information through local school assemblies,
marketing efforts and press releases, and for collecting applications from the sending schools within the Northeast Metro Tech district. For additional details, please see Section V contained herein.

## V. Admissions Communications Policies

Northeast Metro Tech maintains a calendar of events on its website maintains a calendar of events on its website https://northeastmetrotech.com/admissions/ where it provides information on the admissions process, as well as other information about its programs. Students and their families can request hard copies of the calendar by calling or emailing the Admissions Office at 781-246-0810 extension 1302. Northeast Metro Tech recruitment process includes deliberate, specific strategies to promote equal educational opportunities and attract, enroll, and retain a student population that, when compared to students in the Northeast Metro Tech sending municipalities, has a comparable academic and demographic profile.

Northeast Metro Tech disseminates information about the school through a variety of methods, to include:

- The Admissions Coordinator will visit eighth graders at all local middle schools to present and answer questions
- Local Districts will provide student directory information of 7th and 8th grade students per MGL 603 CMR 4.00 by October 15 annually. Utilizing the directory information will be sent to families regarding open house and application process.
- Open House is scheduled for the fall of each school year to all students and families to tour Northeast Metro Tech and view the vocational shops with demonstrations in progress. Representatives from every department are available to answer questions
- ELL/Bilingual Admissions Counselor is available to schedule visits, go to school presentations, and answer questions
- Administrative Assistant for Admissions is Spanish speaking to support our high number of Spanish speaking families.
- Information is shared via social media sites, community groups, and newspapers
- Northeast Metro Tech will provide translation and interpreter services to parents and students whose primary language is not English or Spanish.


## VI. APPLICATION PROCESS

A. Application Process for Fall Admission to the Ninth, Tenth, and Eleventh Grade Information explaining the online application process is available online at https://nmt.go2cte.com/

1. Students interested in applying to Northeast Metro Tech for admission to the ninth, tenth, or eleventh grade can do so by applying online, obtaining an application from their local school Guidance Counselor, accessing the Northeast Metro Tech webpage for an application. https://nmt.go2cte.com/
2. After the application has been submitted, an applicant may:
a. Review the status of their application by logging on to the account that they created when they submitted an online application.
b. The applicant can also get status updates from the local Guidance Counselor or the Admission Counselor at Northeast Metro Tech. If an applicant does not have a guidance counselor, or in the case of homeschooling, the applicant should contact Northeast Metro Tech .
3. It is the responsibility of the local school Guidance Counselor (or other school personnel, if applicable) to:
a. a. Complete or obtain their required school recommendation form and upload to Northeast's Admission Site
b. b. Obtain the current year report card and prior year final report card and upload those documents for use by the Admission Counselor at Northeast Metro Tech .
c. c. Obtain Attendance records, which must include the previous year and current year's record, and differentiate between excused and unexcused absences and upload to the Admission site.
d. d. Obtain and upload to the Admissions site, the official student discipline record. The conduct history of the applicant is required to review for suspensions greater than 10 days under $37 \mathrm{H}, 37 \mathrm{H} 1 / 2$, or $37 \mathrm{H} 3 / 4$ or a pattern of suspensions that may indicate a safety risk in the career technical setting. If a student does not have a conduct record, a letter certifying such suffices.
4. The application information stated above is required for an application to be processed.
5. If incomplete applications are received, the following procedures will be followed:
a. a. The Northeast Metro Tech Admissions Office will notify the local school Guidance Counselor that the application is incomplete and will request completion.
b. b. The applicant's parent(s)/guardian(s) will be notified by the Northeast Metro Tech Admissions Office in the event that the problem is not resolved by the local school guidance counselor.
c. c. If after notifying the local school guidance counselor and parent(s)/guardian(s) and the application remains incomplete for 30 school days, the application will be removed from consideration.
6. Due to the volume of applications received for admission to Northeast Metro Tech, there will be several rounds of acceptance throughout the Spring. In order to be considered for the Spring admissions decision, completed applications and all required documentation must be submitted by March 1st. Completed applications received after March 1st will be considered for future acceptance rounds until the freshman class is filled (See Section VIII. Selection Process for additional information)
B. Late Applicants Late applications will be accepted until June 15th each year but will be processed after applications that have been received by the March 1st deadline. If accepted, they will be evaluated using the same criteria as other applications, and their composite score will be computed. They will be placed in rank order on the established waiting list. No new application (except for career technical transfer students) will be accepted after June 15th, 2024.
C. Transfer Students Applications from students who are enrolled in a state-approved (Chapter 74) career technical high school program in another school (transfer students) will be considered for admission (including admission during the school year) if they relocate away from their current school and wish to pursue the same program of study at Northeast Metro Tech, provided space in the school and/or program is available. All transfer students must attend an informational meeting at Northeast Metro Tech. If the applicant or parent(s)/guardian(s) cannot provide transportation, a Zoom meeting will be set with the applicant. Such applications will be evaluated according to the provisions of the Admission Policy.
D. Previously Withdrawn Students Students who withdraw from Northeast Metro Tech and who are attending or not attending another high school may reapply for admission to Northeast Metro Tech following the procedures contained herein. Those students will be evaluated using their current and previous school year's records.

## VII. SELECTION CRITERIA

Northeast Metro Tech High School enrolls approximately 330 freshmen at the start of each school year. The following criteria, in combination, has historically shown to be crucial to a student's success at Northeast Metro Tech High School. Completed applications are processed by the Admissions Office using weighted admissions criteria. Each applicant will be assigned a score derived from the sum of the sub scores of the following criteria as outlined below.
A. Scholastic Achievement: Maximum 30 points

| Grade Averages |  | Points |
| :--- | :--- | :--- |
| A | $(90-100)$ | 30 |
| B | $(80-89)$ | 25 |
| C | $(70-79)$ | 20 |
| D | $(60-69)$ | 10 |
| F | $(00-59)$ | 00 |
|  |  |  |

For applications to grade 9 (fall admission), the final average of grade 7 and grades from terms 1 \& 2 of grade 8 in English, social studies, mathematics and science from the local school report cards are used. For applications to grades 10, 11, \& 12 (fall admission) the final average of the previous school year and grades from terms $1 \& 2$ of the current school year in English, social studies, mathematics and science from the local school report cards are used. For applications to grades $9,10,11, \& 12$ (admission during the school year) grades from the current school year to the date of the application in English, social studies, mathematics and science from the local school report cards are used. Points are assigned to each subject area identified above for each school year and then averaged to obtain a scholastic achievement grade not to exceed 30 points.

## B. Attendance: Maximum 30 points

| Number of Unexcused <br> Absences | Points |
| :--- | :--- |
| $0-15$ | 30 |
| $15-25$ | 20 |
| $25-35$ | 10 |
| $35-40$ | 5 |
| 41 plus | 0 |

For applications to grade 9 (fall admission), the sum of grade 7 and terms $1 \& 2$ grade 8 total unexcused absences from the local school report card/transcript are used. For applications to grades $10,11, \& 12$ (fall admission) the sum of the previous school year and terms $1 \& 2$ current school year total unexcused absences from the local school report card/transcript are used. For applications to grades $9,10,11, \& 12$ (admission during the school year) the current school year to the date of the application, total unexcused absences from the local school report card/transcript are used.
C. Discipline/Conduct: Maximum $\mathbf{3 0}$ points Maintaining safety for all in career technical schools is essential to participation. An applicant's minor behavior or disciplinary infractions will not be considered as part of this admissions criteria. In accordance with 603 CMR 4.03(6)(a), "minor behavior or disciplinary infractions" for the purpose of this policy shall mean any student conduct other than conduct for which suspension or expulsion is imposed pursuant to M.G.L. c 71 , § 37 H or § $37 \mathrm{H} 1 / 2$, or for which suspension or expulsion for more than 10 days was imposed pursuant to M.G.L. c 71, §37H $3 / 4$.

Each discipline record will be reviewed for infractions that resulted in suspensions or expulsion pursuant to M.G.L. C. 71 , § 37 H or M.G.L. c. 71 , $\S 37 \mathrm{H}-1 / 2$, or resulted in suspension or expulsion for more than 10 days for a single infraction or cumulatively pursuant to M.G.L. c. $71, \S 37 \mathrm{H}-3 / 4$.

Students who receive zero (0) points will be given an opportunity to explain and clarify the suspensions or pattern of suspensions to admissions personnel.

| Discipline/Conduct <br> Rating | Points |
| :--- | :--- |
| No Suspensions | 30 |
| 1 or more suspensions <br> greater than ten days under <br> $37 \mathrm{H}, 37 \mathrm{H} 1 / 2$, or $37 \mathrm{H} 3 / 4$ | 0 |

## D. Local Guidance Counselor's or School Personnel Recommendation: Maximum 10 points

| Rating | Points |
| :--- | :--- |
| Excellent | 10 |
| Above Average | 8 |
| Average | 6 |
| Below Average | 4 |
| Poor | 2 |

## VIII. SELECTION PROCESS

The Admission Committee at Northeast Metro Tech will examine, discuss, and make recommendations for action on all completed applications. The Committee takes into consideration each applicant's scholastic achievement, attendance, discipline record, sending and school recommendation, and any extenuating circumstance reported. Applications are reviewed, processed and assigned points, as noted in Section VII.

After a point total for each applicant has been determined, all applicants are placed in order of their "point total" and town of residence. Applicants are then accepted in order of the point total they have achieved until seat apportionment by city/town is met. The applicant with the highest point total is accepted first, the applicant with the second highest point total is accepted second, and so on until all seats are filled. If openings occur to place a town below their quota, the seats are filled by accepting applicants from the waiting list from that town.

The distribution of surplus enrollment seats will be determined by utilizing the same enrollment ratios that determine the initial apportionment. Applicants, like those accepted earlier, are accepted in order of their place on the waiting list determined by the total points given according to the selection criteria. Late applicant scores will be integrated in rank order and accepted in order of their place on the waiting list.

All applicants for Grade 9 whose applications are received by Northeast Metro Tech by March 1 are notified of their status by a letter to their parents/guardians and their local school Guidance Counselor April 30th. Applicants whose applications are not received by Northeast by March 1st will receive a letter informing them of their status within one month of receipt of their completed application.

Upper class applications received by March $1^{\text {st }}$ will be reviewed after June 1st after career technical openings for the next school year have been identified. Students will be considered for their first three career technical choices as indicated on their applications. Space availability in career technical areas will be a determining factor in selection. Letters regarding admission status will be sent to students and parents by August 1st of each year. In the event that there are more students than spaces available, a waiting list will be maintained. The waiting list will be listed by career technical area and students will be listed according to point totals.

## Enrollment

All letters of acceptance will be conditional pending promotion status. In order to enroll at Northeast Metro Tech, applicants must be promoted by their local school district to the grade they seek to enter. Students must register as students with Northeast Metropolitan Regional School District and their official school records must be sent to Northeast Metro Tech upon transfer of school districts.

Acceptance and enrollment at Northeast Metro Tech is conditional upon the accuracy and completeness of a student's application. Northeast Metro Tech reserves the right to revoke its conditional acceptance of any student, at any time, if it determines that the student, the student's parent(s)/guardian(s), or the student's sending school district provided inaccurate, incomplete, or misleading information during the application process. Additionally, Northeast Metro Tech, reserves the right to further review applications in situations when the applicant's final report card reflects a significant difference in attendance and discipline, and academic performance in terms three and four (or trimester 3 if applicable) and records of discipline and attendance from terms three and four, greatly differ from the initial information received in the application for terms one and two. This review may lead to the re-calculation of the application and possible revocation of student's acceptance to Northeast Metro Tech.

The sending district must supply Northeast Metro Tech with the complete student record at the end of the eighth grade school year in order for the student to enroll as a student at Northeast Metro Tech.

The waiting list will be maintained and students will be contacted through January of the new school year. The waitlist is discontinued as of February 1st of that school year and students must reapply and begin the process anew with current information. (Please note: Prior to the first day of school, in accordance with Massachusetts State Law, updated Immunization records of incoming students should be forwarded to Northeast Metro Tech )

## IX. EXPLORATORY PROGRAM AND VOCATIONAL PROGRAM PLACEMENT

## CAREER TECHNICAL PROGRAM PLACEMENT

All ninth graders who enroll in Northeast Metro Tech participate in a career technical exploratory program designed to help them learn about their talents and interests relative to a variety of different career technical programs. On their applications, students list their top 8 exploratory choices. They are scheduled to explore each of those eight choices and seven additional career technical areas for one week through the first three terms of the school year, a total of 15 weeks of an Exploratory Program.

An evaluative rubric is used by each exploratory teacher to fairly assess all students as they rotate through the exploratory program. Students are evaluated and scored on a 100 point scale by career technical teachers during each week in each shop placement. The scoring scale used assigns points as follows: 10-12 Poor, 13-15 Fair, 16-18 Good, 19-20 Excellent.

The students are evaluated for performance in the Related Theory and Shop areas in the following categories: Related Theory - (1) completion and performance on class assignments, tests, and/or homework; and (2) class behavior; Shop - (3) performance on shop assignments; (4) shop behavior; and (5) shop safety (demonstration of proper use of tools, instruments, materials or supplies). Five points are deducted from the total score for each day absent. A make-up process for the exploratory program will be available to students.

The maximum point total for each exploratory week is 100 points. The maximum possible point total for the exploratory program is $(15 \times 100)=1500$ points. The passing grade for each exploratory week is a 65.

At the end of the fifteen-week exploratory period, each student selects his/her program of choice by rank ordering (from high interest to low interest) all of the shops they have explored where passing grades (65 or above) have been received.

The computer then sorts all student choices attempting to give each student their first choice. The rank order of students entering each shop is based on the numerical grade earned from the exploratory week. If a shop enrollment reaches capacity and is closed to a student, the computer attempts to assign the student to his/her second choice, third choice, etc. until placed. If students are tied in points to enter a shop, the tie is broken by the total number of exploratory points earned throughout their entire exploratory program. If a tie remains, the academic grade point average will be used to break the tie.

## Student Not Accepted into Selected Career Technical Area/Placed on Shop Waiting List

The applicant's parent/guardian, upon receipt of written notification from Northeast Metro Tech indicating that the applicant was not accepted or placed on a waiting list for a particular program (shop)(major), may request a review of the decision by sending a letter requesting a review to the Principal within thirty days of the receipt of the letter. The Principal will respond in writing to the letter with the findings of the review within thirty days.

Students who wish to transfer from one shop to another during the school year may apply for transfer. Transfer requests will be considered subject to the availability of openings in the requested shops. Each transfer applicant will be interviewed individually to determine the appropriateness of the transfer for the
particular student. Shop transfer requests after the first trimester of the sophomore year are only granted in extenuating circumstances.

| By email | By hard copy mail or hand delivery |
| :--- | :--- |
| cscuzzarella@northeastmetrotech.com | Northeast Metro Tech <br> 100 Hemlock Road <br> Wakefield, MA 01880 |

## X. REVIEW AND APPEALS PROCESS

## Student Not Accepted into School/Placed on Waiting List

The applicant's parent(s)/guardian(s), upon receipt of a letter from Northeast Metro Tech indicating that the applicant was not accepted or placed on a waiting list, may request a review of the decision by sending a letter requesting a review to the Assistant Superintendent within fifteen days of the receipt of the letter. The Administrator of Student Services will respond in writing to the letter with the findings of the review within thirty days.

These requests can be made in the following ways:

| By email | By hard copy mail or hand delivery |
| :--- | :--- |
| tobrien@northeastmetrotech.com | Northeast Metro Tech |
|  | 100 Hemlock Road |
|  | Wakefield, MA 01880 |

If after the review, the parent/guardian wishes to appeal the findings of the review they may do so by sending a letter requesting that they be scheduled to appear before the Superintendent-Director to appeal the Assistant Superintendent's findings. The Superintendent-Director will respond in writing to the parent/guardian with a scheduled date for the appeal within fifteen days of the receipt of the letter. After hearing the appeal, the Superintendent-Director will respond in writing with a decision on the appeal within thirty days of the meeting when the appeal was presented.

| By email | By hard copy mail or hand delivery |
| :--- | :--- |
| ddibarri@northeastmetrotech.com | Northeast Metro Tech <br> 100 Hemlock Road <br> Wakefield, MA 01880 |

## XI. MAINTENANCE OF RECORDS

Northeast Metropolitan Regional Vocational Technical School maintains records of all students who apply, enroll, or are waitlisted, as well as their score on admission criteria, to facilitate analysis of its admissions system and compliance with applicable laws and regulations.

## ADDENDUM

For the 2024-2025 admissions cycle, Northeast Metro Tech will utilize a pilot admissions lottery for ten (10) percent of the freshmen class for eligible applicants.

The first 35 seats will be selected out of the applicant pool of completed eligible applicants. The student lottery seats will be applied to the city/town quota. The data from the lottery will be used in conjunction with all other collected data to determine necessary adjustments in admissions criteria.

## Athletic program

The Northeast Metro Tech athletic program offers a wide array of activities for both boys and girls and encourages participation, skill development, and a positive competitive philosophy. Late afternoon transportation is provided when after school practices or events are scheduled to enable students to become involved. The following list identifies the sports available throughout the year:

| Baseball | (Freshman, JV, Varsity) |
| :--- | :--- |
| Basketball - Boys | (Freshman, JV, Varsity) |
| Basketball - Girls | (Freshman, JV, Varsity) |
| Cheerleading | (Football, Basketball, Hockey) |
| Cross Country Track | (Co-ed Varsity) |
| Football | (Freshman, JV, Varsity) |
| Golf | (Varsity) |
| Hockey | (JV, Varsity) |
| Indoor Track \& Field | (Co-ed Varsity) |
| Lacrosse - Boys | (JV, Varsity) |
| Lacrosse - Girls | (JV, Varsity) |
| Soccer - Boys | (Freshman, JV, Varsity) |
| Soccer - Girls | (Freshman, JV, Varsity) |
| Softball | (Freshman, JV, Varsity) |
| Swimming | (Co-ed Varsity) |
| Tennis | (Varsity) |
| Outdoor Track \& Field | (Co-ed Varsity) |
| Volleyball - Girls | (Freshman, JV, Varsity) |
| Wrestling | (Varsity) |

An intramural program of sports and activities is run in the fall and the spring for students who are interested in participating in activities on a less competitive level. For addition information see our website at www.northeastmetrotech.com or contact the Athletic Director at 781-246-0810 x1251.

## Clubs and activities

## Class Officers and Advisors

Each of the four classes at Northeast elects four officers on an annual basis: president, vice president, secretary, and treasurer. Class officers, together with a faculty advisor for each class, are responsible for the extracurricular activities of the class throughout the year.

## Equity Club

Northeast offers a school-based support group that provides students with a place to meet and talk about issues related to sexual orientation. The group works to create a positive school climate, making Northeast a safe place for all students.

## National Honor Society

The Northeast Honor Society is an academic society known as the Northeast Artisans. The purpose of the chapter is to create enthusiasm for scholarship, to stimulate a desire to render service, to promote leadership, and to develop character in the students of secondary schools. Regular meetings will be held during the school year. The chapter will determine one or more service projects each year. All projects will fulfill a need within the school or community and each member will be responsible for choosing and participating in a service project which reflects his or her particular talents or interests in addition to chapter-wide activities. Student members must fulfill a minimum of forty hours of community service per year.

## National Vocational Technical Honor Society

Northeast Metro Tech has a chapter in the National Vocational - Technical Honor Society. The chapter strives to promote the ideals of honesty, service, leadership, and skill development among America's future work force; to reward scholastic achievement in occupational, vocational and/or technical education; to assist Society members in their pursuit of career and educational goals; to help build and maintain a stronger, more positive image for vocational and technical students, programs and schools in the local community and throughout the nation; to encourage the practice of high responsibility among the membership; to help member schools to initiate and maintain strong working partnerships with local institutions of business, industry and commerce. Regular meetings are held throughout the year and the chapter will determine the service projects it will sponsor throughout the year. All members are to participate in at least one of these projects to fulfill their commitment of community service.

## Skills USA

The Skills USA is a national student organization at Northeast specifically for trade, technical, and health occupation students. It is an organization designed for and run by vocational students. Skills USA offers prestige and recognition through a program of awards and contests which start at class and shop level and lead through state and national competition. Some skill areas even have international competition. Skills USA advisors are found in each trade area and all students are encouraged to become members. Skills USA encourages a strong work ethic and an opportunity for students to learn more about their strengths in their trade/career areas. For more information visit www.SkillsUSA.org

## Student Council

The Student Council is made up of representatives from all four classes and a faculty advisor is appointed by the principal to provide guidance and leadership. Students interested in becoming members fill out applications and the existing council members vote to accept new members. The president, vice president, secretary, and treasurer are elected by the council membership and these four elected officers compromise the executive board which meets with the principal to discuss school issues on an as needed basis. The Student Council's primary responsibility is to promote school spirit and unity and to represent the entire student body with regard to school issues to the faculty and the administration. Two council members represent Northeast at monthly meetings of the Massachusetts Student Council Association and the president attends and participates at the monthly Northeast School Committee meetings.

## Students Against DestructiveDecisions (SADD)

The Northeast Chapter of SADD works to promote safe decisions regarding drug and alcohol use and safe driving. Students are involved in peer training activities and are planning positive events that students can be involved in without peer pressure to use drugs or alcohol. Northeast students are working to promote a safe environment at Northeast and to use positive peer pressure to help kids make good decisions.

## SUPPORT SERVICES

## Kick-off Mentoring Program:

Northeast has a peer mentoring program to provide support for freshmen by upper class mentors. The mentors design and run the first day of school for freshmen. They also meet with freshmen throughout the year to provide support and to discuss teen issues

## Non-traditional Support Program

A support program around the issue of gender equity has been established to work with students of all grades. Workshops are conducted for all freshmen identifying the benefits and concerns associated with choosing non-traditional careers. For all sophomores, workshops are presented that focus on the issue of sexual harassment and identifying in-school and employment procedures to follow if faced with such concerns. For sophomores, juniors, and seniors, the Guidance Department conducts support groups for students who are enrolled in vocational shops that represent non-traditional choices (i.e., girls in construction trades, boys in cosmetology or health careers).

## Peer Mentoring program

This program provides educational assistance to students having difficulty with one or more academic or career technical subjects and is overseen by an interdisciplinary team of teachers. Students who have been successful in specific subject areas may also assist in providing academic support. This service is designed to supplement after school assistance provided by the classroom teachers.

## Peer Mediation Program

Northeast provides a peer mediation program, under the direction of a full time coordinator. This program provides training to upper class students in conflict resolution and leadership skills. Trained mediators help other students resolve disputes. A mediator is a neutral person who helps people come to their own agreement about how they want to resolve a problem. Mediation is voluntary and confidential.

| NORTHEAST METRO TECH HIGH SCHOOL2021-2022 |  |  |  |
| :---: | :---: | :---: | :---: |
| Period | Trimester 1 | Trimester 2 | Trimester 3 |
| 7:45 | Warning Bell | Warning Bell | Warning Bell |
| 7:53-7:56 | Homeroom | Homeroom | Homeroom |
| $\begin{aligned} & 1 \\ & 7: 59-8: 57 \end{aligned}$ |  |  |  |
| $\begin{aligned} & 2 \\ & 9: 00-9: 58 \end{aligned}$ |  |  |  |
| $\begin{aligned} & 3 \\ & 10: 01-10: 59 \end{aligned}$ |  |  |  |
| ```4 11:02-12:28 (includes }23\mathrm{ minute lunch)``` |  |  |  |
| $\begin{aligned} & 5 \\ & 12: 31-1: 29 \end{aligned}$ |  |  |  |
| $\begin{array}{\|l\|} \hline 6 \\ 1: 32-2: 30 \end{array}$ |  |  |  |

