Bay Path Regional Vocational Technical High School

PROGRAM OF STUDIES

2026-2027

Bay Path RVTHS
57 Old Muggett Hill Road
Charlton, MA 01507
508-248-5971

Bay Path Regional Vocational Technical High School District

MISSION STATEMENT

It is the mission of Bay Path Regional Vocational Technical High School to facilitate current, integrated, and rigorous academic and technical vocational programs that prepare students for the ever-changing world of employment and post-secondary education; to provide a school culture that meets the diverse needs of our student body for safety and mental wellness; and to foster student confidence, professionalism, and life-long learning skills that will enable them to become contributing members of our communities.

CORE VALUES

Own It

We take full responsibility for our actions and their impact on our shared community. We proactively identify challenges, set and achieve goals, and hold ourselves and one another accountable for maintaining a safe and supportive environment.

Strive for Excellence

We seek feedback, learn from mistakes, and look for ways to enhance our skills and processes, persist through challenges and setbacks, and use them as opportunities for growth.

Have an Attitude of Gratitude

We foster a culture of respect and appreciation by recognizing the value in everyone's work and every shared experience. We are thankful for our team, our stakeholders, and the opportunity to make a difference. Our gratitude fuels our collaboration and strengthens our relationships.

Act with Integrity

We take ownership of actions and outcomes, both individually and as an organization. Our words and actions align. We do what is right, not what is easy. We build trust by being transparent, reliable, and consistent in all our actions and communications.

Be Kind

We are committed to building a community where everyone feels a sense of belonging. We treat each other with kindness, dignity, and empathy. We actively seek out and value diverse perspectives, knowing that our collective strength comes from the unique contributions of every individual.

EXPECTATIONS FOR STUDENT LEARNING

Bay Path student learning expectations are measured through individual trade competency testing, SkillsPlus, and quarterly academic progress reports.

Academic & Career

Students will:

- Develop critical thinking skills to effectively identify, analyze, and solve problems Acquire the knowledge necessary to meet state-mandated graduation requirements and vocational occupational proficiencies.
- Establish communication skills in multiple modes to address needs within and become contributing members of career and technical fields
- Demonstrate good work habits such as organization, orderliness, cleanliness, and respect for property and the environment.

Civic

Students will:

- Demonstrate collaboration and communication within the Bay Path and sending school communities.
- Establish relationships with local industry.
- Understand local, state, and national government in order to become productive citizens and contributing members of society

Social

Students will:

- Demonstrate skills, positive work behaviors, and attitudes necessary for success in college and career.
- Develop self-awareness, respect for authority, and an understanding of each individual's responsibility to themselves, their communities, their nation, and the world.

ADMINISTRATION

Mr. Kyle Brenner	Superintendent/Director
Mr. Dean Packard	Principal
Mr. James Tripp Pockevicius	Vocational Director
Mrs. Jennifer Stachura	Assistant Vocational Director & Coop Coordinator
Mrs. Nancy Alpine	Pupil Personnel Services Director
Mrs. Tracey Coleman	Assistant Pupil Personnel Services Director
Dr. Samantha McGuane	Curriculum Director
Mr. Daniel McGowan	Assistant Principal
Mrs. Amy Burritt	Assistant Principal
Mr. Christopher Kyne	Assistant Principal
Mr. Thomas-James Carron	Director of Technology
Mrs. Cindy Schofield	Business Manager
Ms. Sheri Dreitlein	Evening School Director

GUIDANCE SERVICES

Guidance personnel support students as they make decisions regarding vocational and educational planning, and to aid students in the development of strategies to overcome personal difficulties. The best way to use counseling services is to make an appointment. Guidance Counselors support students in career training, academic requirement fulfillment, and individual growth. Counselors are trained to guide students through their high school experience so they may become independent, contributing adults in our local communities.

Orientation:

- Introductory Presentation (8th Grade)
- Pre-exploratory program at Bay Path Regional Vocational Technical High School for 8th graders
- Orientation Session with Counselor

Information:

- Library of occupational/educational materials
- Information on technical career colleges and post-secondary institutions
- Armed services materials

Counseling:

- Private counseling by appointment
- Referrals to various outside counseling agencies
- Parent conference upon request

Testing:

- Comprehensive Test of Basic Skills and MCAS
- Various Nationally Recognized Standardized Tests

Admissions and Placement:

- Application process
- Transfer service
- College admissions process
- Job placement services in collaboration with the Co-operative Education Program

STUDENT TRANSFER POLICY

Students who wish to transfer from one vocational shop to another: Students wishing to transfer from one vocational department to another must submit their name to their guidance counselor so that they may be placed on a waiting list. Students are placed on the waiting list in accordance with their level of performance in their present shop or in the case of a grade nine student, according to their exploratory performance. Transfers will be made on the following basis:

a. Parental permission
b. Availability of space
c. Validity of transfer request
d. Administrative reasons
e. Vocational Director approval of the request

Since transfers are made on a space-available basis, they may be made through November 1st of sophomore year. Please note that shop hours are not transferable from one shop to another.

Students who wish to transfer from one academic course to another: Students wishing to transfer from one academic course to another must submit a request to their guidance counselor in writing, stating the reason for the request. Students must secure written permission for the transfer from the present instructor, parent, and counselor before the transfer will be considered by the Pupil Personnel Director.

No transfer will be permitted after November 30 of the school year, unless the transfer is being requested by a member of the administration or is being done as part of a student's education plan under Chapter 766. Transfers will be made on the following basis:

f. There is space available
g. The present instructor agrees with transfer
h. It is a valid request
i. It is prior to November 30
j. It is an administrative request or a request under Chapter 766
k. Parental permission has been granted
l. The Director of Pupil Personnel Services has approved the request

Students who wish to transfer out of Bay Path: Students wishing to transfer to another school should make an appointment with their guidance counselor to discuss this option. The student must secure parental permission and must meet all financial obligations to Bay Path before the transfer will be completed.

Students who wish to transfer into Bay Path: Transfer students who have been promoted by their local high schools will be placed according to their academic transcript. Shop and related credits will be waived. These students will receive a certificate of attendance in their vocational area rather than the trade certificate. However, transfer students must meet all other graduation requirements.

GRADUATION REQUIREMENTS

Freshmen Year Requirements

Course:	Credits:
Shop	3.5
Related	1.0
Social Studies	1.0
Phys. Ed	.25
Health	.25
English	1.0
Math	1.0
Science	1.0

Total credits 9.0

Sophomore Year Requirements

Course	Credits:
Shop	3.5
Related	1.0
Social Studies	1.0
Phys.Ed	.25
Health	.25
English	1.0
Math	1.0
Science	1.0

Total credits 9.0

Junior Year Offerings

Course	Credits:
Shop	4.5
Related	1.0
Social Studies	0.5
English	1.0
Math	1.0
Science	1.0

Total credits 9.0

Senior Year Offerings

Course	Credits:
Shop	4.5
Related	1.0
Social Studies	0.5
English	1.0
Math	1.0
Science	1.0

Total credits 9.0

Total credits for graduation is 36

Competency Determination

A mandatory requirement for co-op participation and graduation is the demonstration of competency in Grade 10 English, Algebra, Geometry, and Biology frameworks. Students must achieve this either through passing MCAS scores or by successfully completing subject-specific competency requirements during their junior or senior year.

COURSE LEVELS

Advanced Placement courses (AP) are comprised of College Board approved instructional units of study. They offer students an opportunity to take college level courses and exams while in high school. These courses stand out on high school transcripts, save money, and prove college readiness. Passing exam scores qualify students for college credit at many colleges and universities.

Honors courses combine rigorous and challenging instruction with high expectations for student commitment, participation, and achievement. The workload and pacing of these classes correspond with those expectations. Those pursuing an academic pathway toward successful transition to a four-year college or university should enroll in these classes.

General education courses are college preparation courses that combine challenging instruction with expectations consistent with what is required for success in a two- or four-year college or university. Differentiated levels of the general education courses are available for students who qualify for Special Education Support.

PROMOTION

- Students must pass all subjects in grade 9, 10, 11, and 12.
- Only students who have completed all graduation requirements will be allowed to participate in graduation ceremonies. This includes resolution of all obligations, payment of class dues, outstanding book or equipment bills, and remaining discipline.
- If a student is retained in any grade, the student will have to repeat all classes the following year, even if the student received a passing grade in a specific class for the year. For any class(es) that the student passed during that school year, the final grade(s) in the course(s) will be averaged with the final grade(s) from the current school year and must average a passing grade. If a student failed a class in their first attempt at the class, they need a 65% average in the current year to gain credit, not an average of 65% between the two years.
- The Massachusetts Department of Education has established the passing score on the MCAS as 240 points in English and Math. Students who score between 220 and 238 will have an Educational Proficiency Plan (EPP) charting the courses that the student will need to take during their junior and senior years and how the student's progress will be measured.
- All students must take and pass an MCAS science test based on the Science and Technology Framework standards. The Massachusetts Department of Education has established a passing score of 220 points for the science test. The test the students will take will be determined by Bay Path.
- All students must complete a Graduating Senior Portfolio. The portfolio contains at

minimum: a competency profile demonstrating the acquisition of knowledge and skills associated with at least two years of full-time study in the program, a career plan, safety credentials, and a resume.

HONOR ROLL

- Students who have earned a 90.0 in all subjects and have at least an average of 75% in gym will be placed on High Honors for that quarter.
- Students who have earned an 80.0 or higher in all subjects and have at least an average of 75% in gym will be placed on Honors for the quarter.
- Students who have a combined average in all courses of 80% with no grade less than 75%, will be placed on the Principal's List for the quarter.
- Students earning an Incomplete in a course will not be placed on the Honor Roll.

CLASS RANK

- A student's class rank is calculated based on performance: number of credits, course grades, and quality points. Quality points are assigned to each course so that more weight is given to courses that demand higher scholastic achievement.
- A student's class rank is determined by dividing the Total Weighted Product by the Maximum Weighted Product producing a Weighted Grade Average.
- The Maximum Weighted Product is the total amount of credits carried by a student multiplied by 100, the highest grade a student may earn.
- The Weighted Product is the amount of credits carried by an individual course multiplied by the student's grade and Quality Point assessment carried by the course.
- The Total Weighted Product is computed by adding the Weighted Products of all courses carried by the student.
- The Weighted Grade Average is determined by dividing the total Weighted Product by the Maximum Weighted Product: i.e., T.W.P./M.W.P. = W.G.A.
- Students are then ranked in order by the Weighted Grade Average.
- For the purpose of class rank, an Incomplete will be calculated as a grade of 0.

GRADE FAILURES

Please refer to the Student Handbook for up to date policies regarding retention and promotion.

ELECTIVE OFFICE AND SCHOOL SPORTS PARTICIPATION CRITERIA

To be eligible to participate in any sport, to be elected to any school or class office, or to participate in any extra-curricular activity, a student must pass all major courses: Shop, Related, English/Reading, and Math. To be eligible at the beginning of the school year, the student must have been promoted to the next grade level. To be eligible during the school year,

the student must maintain a cumulative passing average *and* a passing average for each individual quarter.

Academic eligibility shall be considered as official and determined only on the date when report cards for that marking period have been issued. An "incomplete" will be treated as a grade of 55, until the instructor submits a grade change.

Students on any type of suspension may not participate in school sports or any other school activity until the suspension has been completed

STUDENT SUPPORT SERVICES

Special Education services in academic and vocational courses are determined annually by the Individual Education Plan (IEP) team and may include the following, as identified in the student's IEP:

1. Inclusion: The IEP team determines that the student requires the support of a paraprofessional or licensed special education teacher within the general education setting.
2. Learning Center: The IEP determines that the student's disability requires specialized instruction in a separate classroom from the general education setting.
3. Academic Support: The student is removed from the general education setting to receive supplemental instruction, reinforcement, or assessment accommodations from a licensed special education teacher or paraprofessional.
4. Consultative and Supplemental Services (OT, PT, School Psychologist, and Speech-Language): the IEP team designates these services based on the student's evaluations and progress.

Note: Title I is not part of Special Education.

OCCUPATIONAL EDUCATION PROGRAM

Bay Path Regional Vocational Technical High School offers an excellent range of vocational programs, including:

1. Advanced Manufacturing
2. Auto Collision Repair and Refinishing
3. Automotive Technology
4. Building and Property Maintenance
5. Business Entrepreneurship and Marketing
6. Cabinetmaking
7. Carpentry
8. Cosmetology
9. Culinary Arts
10. Dental Assisting
11. Diesel Technology
12. Drafting
13. Electrical
14. Electronics
15. Graphic Communications
16. Health Technology
17. Heating, Ventilation, Air Conditioning & Refrigeration
18. Information Support Services & Networking
19. Masonry & Tile Setting
20. Metal Fabrication & Joining Technology
21. Plumbing
22. Programming & Web Development
23. Veterinary/Animal Science

A trade certificate will be issued for a specific vocational program to a student who has accumulated shop and related hours according to the following schedule:

> Classes must earn 2,240 shop and related hours. Cosmetology students will be awarded trade certificates if they acquire 1,280 hours.

These shop hours can only be accumulated through good attendance and satisfactory performance on shop assignments. An instructor may deduct hours for unsatisfactory work performance. Students receiving an F for a daily grade in shop cannot be considered as having performed satisfactory work, and shop hours may or may not be awarded at the discretion of the shop instructor.

Those students who have not completed the necessary hours as listed above will receive a card stating the exact number of hours they have completed toward the hours.

EXPLORATORY PROGRAM

Please see the Student Handbook for the most up to date policy and placement criteria.

Grade 9 students are accepted into a half-year exploratory program. Students in exploratory will visit nine different vocational areas during the first half of their freshmen year. When completing their applications, students rated all the vocational programs offered at Bay Path from the first choice to the last choice. The Guidance Department then attempts to schedule the student to explore his/her highest selected programs. We try to guarantee that all students will have the opportunity to explore their first and second choices. Their remaining schedule will be completed with courses that they have selected among their top ten choices. Generally, each student will explore at least one random vocational area.

Students will explore each vocation on the exploratory schedule for a minimum of four days in the shop. Students will earn a separate shop and related grade for each vocational area explored.

It is imperative that all students perform to their utmost ability in all areas. Each vocational area has a limited amount of space available to students, and all students in grade nine are on a competitive basis for those spaces. Students who are absent must complete an assignment for that instructor whose shop program or related class they miss. All students are awarded a grade for each day of the program.

Students who do not receive their first choice may place their names on a waiting list. Transfers are possible on a space-available basis, and only if students have been moved from a waiting list. Students may be placed on a waiting list for another shop by making an appointment with their guidance counselor. Students are scheduled from the waiting list according to the original scheduling formula. Transfer between programs will take place no later than November of sophomore year.

STATEWIDE ARTICULATION AGREEMENTS

Massachusetts has recently established Statewide Articulation Agreements among the 15 Massachusetts Community Colleges and Chapter 74 approved Secondary Career/Vocational Technical High Schools across the Commonwealth in 14 vocational areas. Bay Path students who choose to attend one of the 15 community colleges in Massachusetts are eligible to receive college credits for their work in eligible shop areas. For more information, please contact students' Guidance Counselors and/or visit: http://www.masscc.org/articulation

Massachusetts State Articulation Agreements for CTE Chapter 74 High Schools			
MA Approved Chapter 74 Technical Programs	**QCC Approved Equivalent Courses**	**Credits**	**Total Credits**
Advanced Manufacturing	MNT 100 Safety (must have OSHA 0 certificate) MNT 101 Mechanical CAD I MNT 106 Quality (NC3 PMI credentials required) MNT 108 Basic Machine Operation	3 3 3 3	12
Automotive Technology	AUT 102 Fundamentals of Automotive Service	3	3
Business Technology	CIS 111 Introduction to Microcomputer Applications (MOS certificates required or take QCC Microsoft Office competency exam)	3	3
Culinary Arts	HRM 110 Basic Foods: Mise En Place HRM 115 Sanitation Certification HRM 888 HRM Elective	3 1 3	7
Design & Visual Communications	IMD 114 Digital Design Concepts I	3	3
Drafting	MNT 101 Mechanical CAD I	3	3
Health Assisting (CNA)	ALH 102 Medical Terminology ALH 13 Introductory Nursing Assistant ALH 132 Advanced Nursing Assistant	3 5 2	10
HVAC-R	HVC 101 Basic Refrigeration Systems and Heat Technology	4	4
Information Support Services & Networking	CSC 233 Computer Hardware and Support CSC 234 Networking Technologies	4 4	8
Dental Assisting Only Bay Path @ QCC	ALH 102 Medical Terminology ALH 188 Healthcare Elective ALH 188 Healthcare Elective ALH 188 Healthcare Elective	3 3 3 3	12
Electronics Only Bay Path @ QCC	ELT 103 ELT DC and AC Circuits ELT 104 Electronic Devices ELT 121 Digital Circuits	4 4 4	12
Early Childhood Education **(not applicable for Bay Path)**	ECE 888 Early Childhood Education Elective ECE 101 Intro to Early Childhood Education ECE 102 Growth & Development of the Young Child (after ECE 101)	3 3 3	6-9
Engineering Technology **(not applicable for Bay Path)**	ELT 103 DC and AC Circuits	4	4
Hospitality Management **(not applicable for Bay Path)**	HRM 115 Sanitation Certification HRM 135 Front Office Operations HRM 888 HRM Elective	1 3 3	7
Medical Assisting **(not applicable for Bay Path)**	ALH 102 Medical Terminology	3	3

APPRENTICESHIPS

Apprenticeships are formalized, structured training programs combining on-the-job training and related technical instruction in which paid employees receive practical and technical training in their trade area. Apprenticeships are industry-driven career training. Apprenticeships usually begin after high school. The following agreements allow students who are juniors or seniors to apply, provided they have met the same requirements for Co-op, they have made an application

to the union, and they have a driver's license.

- Bay Path presently has apprenticeship agreements with the following unions: The Sheet Metal Workers Joint Apprenticeship Committee Local Union #63 and the Plumbers and Pipefitters Joint Apprenticeship Committee Local Union #4.

- These agreements cover the career areas of Heating, Ventilation, Air Conditioning & Refrigeration; Plumbing; and Metal Fabrication & Joining Technologies. Students wishing to apply to the unions must meet school criteria as well as each union's requirements. (See Apprenticeship Manuals in the Vocational Director's Office.)

CO-OPERATIVE WORK PROGRAM

The following procedures will be the governing factors in the operation of our Co-Op program. These regulations are necessary to establish the responsibilities of all parties concerned to successfully implement a strong co-op program. Many of these procedures have been established by the State Board of Education and are highlighted in the Chapter 74 manual for Vocational Technical Cooperative Education.

1. Students must meet the eligibility criteria to be considered for the cooperative education experience. To meet eligibility requirements, students:
    1.1. Must be midway through their junior year and have completed a minimum of at least one- and one-half years of study in the cooperative education program area and have demonstrated achievement of those academic, technical, and employability competencies that will ensure success as a co-op student.
    1.2. Must realize that their academic success is fundamental to their future success in their personal and professional lives and therefore are expected to meet the following grade requirements.
        - Junior Year End of Q2 Shop & Related: Minimum Quarter Grade of 80.
        - Junior Year End of Q2 Shop & Related: Minimum Yearly Average of 80.
        - Junior Year End of Q3 Shop & Related: Same as Q2 requirements.
        - Senior Year Shop & Related: Yearly and Q4 grade of 80 at the end of the junior year.
        - Achieve a 70 or better in each academic class.
        - Students will be placed on probation if a grade falls below an 80 for shop or related, and a 70 in an academic class.
        - Failure to improve by the following marking period may result in removal from the program.
        - Students entering the co-op program after the first quarter are expected to have a 70 yearly average for each academic class in addition to the minimum grade requirement of 70 for the marking term.
    1.3. Must meet the necessary graduation requirements.
    1.4. Should be recommended and endorsed by their shop and related instructors who will assess and document that the student has demonstrated the following qualities/skills needed to be a successful co-op student:
        - Successful accomplishment of an adequate amount of the trades curriculum

- Interpersonal skills
- Communication skills
- Work ethic, motivation and initiative
- Politeness, favorable manners and respectfulness

1.5. Must be approved by the guidance counselor who will determine if the student has earned all necessary credits to meet promotion/graduation requirements.

1.6. Should establish and maintain good attendance patterns with no more than 3 unexcused absences or tardies per quarter.

1.7. Is expected to demonstrate good behavior and citizenship. Any violations of the school's disciplinary code of conduct may result in the removal of the student from the co-op position or may cause ineligibility to enter the co-op program.

1.8. Must present to the Co-op Director and prospective employer a neat, organized, up to date resume, OSHA Safety Certification, cover letter, and personal reference page.

1.9. Must be recommended by the Co-op Director who reserves the right to remove any student from the co-op program when these minimum requirements are not being met.

2. The work performed at the cooperating company shall meet the standards of industry. Students will be paid a reasonable (at least minimum) hourly wage for the type of work performed. While on co-op, they will work the same number of hours, but at least thirty hours, and under the same conditions as other employees. Students are required to turn in their co-op timecards every week (on the first academic day following co-op) and upon request a copy of their pay stub must be turned in to the Director of Cooperative Education. Failure to turn in time cards for three or more consecutive weeks will result in a suspension from the Co-op Program. Repeated failure to turn in time cards could result in removal from the Co-op Program.
3. Students who are not 18 years of age are under the following restrictions:
    - Cannot operate hazardous equipment unless approved by the Massachusetts Department of Labor
    - Cannot work more than nine hours per day, no more than 48 hours per week.
    - Cannot start work earlier than 6:00 a.m. or work later than 10:00 p.m.
    - Companies and students must agree to and sign all cooperative education agreements
4. Failure to follow school rules, co-op regulations, falsifying illness, or falsifying timecards will result in removal of the student from the program and possible disciplinary action.
5. When a co-op student is absent from work it is the responsibility of the student to:
    - Notify the employer as early as possible
    - Notify the school (Main Office) of your absence from work
6. When the student is returned to school from co-op for any reason, the student shall notify their instructor or the Co-op Director of their presence and an estimate of how long they will be out of work.
7. When a co-op student ends their employment, the student must report this fact to the Co-op Director no later than 7:25 on the next school day. The student must explain the reason that they are no longer employed.

TITLE IX/CH. 622 POLICY/SECTION 504 NOTIFICATION

It is the policy of Bay Path Regional Vocational Technical High School not to discriminate on the basis of sex, race, color, religion, a handicap, or sexual orientation in its educational programs, activities, or employment policies as required by Title IX of the 1972 Educational Amendments and Rehabilitation Act of 1973.

Inquiries regarding compliance with Title IX /Title VI and Chapter 622, or Section 504 may be directed to the Director of Pupil Personnel at Bay Path Regional Vocational Technical High School, 57 Old Muggett Hill Road, Charlton, MA 01507. Concerning Title IX/Title VI and Section 504, inquiries may, also be directed to the U.S. Department of Education, Director of the Office for Civil Rights Region, ED 8th Floor, 5 Post Office Square, Boston, MA 02109-3921.

Contact: Phone: 617-289-0111; e-mail address ocr.boston@ed.gov

ACADEMIC
COURSE DESCRIPTION GUIDE

ENGLISH

GRADE 9 COURSE OFFERINGS

ENGLISH I PRE-AP
Grade 9, Course #2031 Q.P. 1.10 1.00 Credit

This Pre-AP preparatory class is for skilled readers who have shown that they are both motivated and capable. Students will study traditional grammar, paragraph structure, and composition. Through examination of appropriate models from literature, students will develop a sense of style. Students will learn to analyze the elements of fiction and nonfiction through short stories, novels, dramas, essays, and poetry. Students will learn to write at a more advanced level with an emphasis on focus, organization, and detail. There will be homework, including both reading and writing, which is expected to be consistently completed.

ENGLISH I
Grade 9, Course #2001 Q.P. 1.00 1.00 Credit

Students will review and practice basic writing skills, focusing on writing well thought out sentences, paragraphs, and essays. Students will learn and demonstrate speaking and listening skills that emphasize organization and clarity. Students will examine and study many different forms of literature including short stories, novels, drama, and poetry. They will work to develop new vocabulary and comprehension skills while also preparing for any state-mandated testing. Students should expect outside reading and assignments throughout the year and must remain current with homework submissions. Shop week homework is also assigned regularly.

Differentiated Sections

Course ID: #2021 The curriculum content is parallel to the course description of *English I* and taught by Special Education instructors. Students will be selectively scheduled into this small group course based on individualized learning needs.	**Course ID: #2011** The curriculum content is parallel to the course description of *English I* and is team-taught by Special Education and English instructors.	**Course ID: #2061** The curriculum content is parallel to the course description of *English I* and taught by Special Education instructors. Students will be selectively scheduled into this small group course based on individualized learning needs.

GRADE 10 COURSE OFFERINGS

ENGLISH II PRE-AP
Grade 10, Course # 2132 Q.P. 1.10 1.00 Credit

This course is a continuation of the *Freshman Pre-AP English I* class designed for capable and motivated students. The majority of the students in this course are considering two-year technical schools or colleges after high school. Students will expand vocabulary and comprehension skills as they study the four genres in literature. Written assignments will include both composition and research projects. Grammar study and state assessment test preparation are also included. Timely completion of both regular homework assignments and outside readings are required. The writing done in this course will be more extensive and is meant to prepare students for the AP English courses offered junior and senior years.

Students who did not take English I-Pre -AP must have a recommendation from their English teacher and approval from the Department Head.

ENGLISH II
Grade 10, Course #2102 Q.P. 1.00 1.00 Credit

Students will continue to develop their skills in different types of composition writing (argumentative, informative/explanatory, and narrative). Students will identify and examine the elements of literature by working with the short story, nonfiction, the novel, drama, and poetry. Students will also work to increase their vocabulary skills, as well as their speaking and listening skills. Preparation for state assessments is intensive. Regular homework assignments as well as outside readings are the norm. Shop week homework is assigned on a regular basis.

Differentiated Sections

Course ID: #2122 The curriculum content is parallel to the course description of *English II* and taught by Special Education instructors. Students will be selectively scheduled into this small group course based on individualized learning needs.	**Course ID: #2112** The curriculum content is parallel to the course description of *English II* and is team-taught by Special Education and English instructors.	**Course ID: #2062** The curriculum content is parallel to the course description of *English II* and taught by Special Education instructors. Students will be selectively scheduled into this small group course based on individualized learning needs.

GRADE 11 COURSE OFFERINGS

AP ENGLISH LANGUAGE AND COMPOSITION
Grade 11, Course #2243 Q.P. 1.20 1.00 Credit

Juniors who like to challenge themselves, have taken pre-AP classes, and have plans for higher education are eligible for this advanced placement course. It is comparable to a freshman English I composition course in college. Students enrolled are required to take a national exam at their own expense in May. Those who earn a qualifying score (3 or higher) on the exam are eligible to earn up to one year of college English (three credits). This course is intended to help students become skilled readers of prose written in a variety of rhetorical contexts and genres and to become proficient writers who compose for a variety of purposes. Emphasis is placed on critical thinking, analysis, synthesis, argument, and reflection, employing close reading strategies. Process-oriented writing is an integral part of the course. Students will employ a variety of research methods, including an MLA research paper. Students are expected to demonstrate proper grammatical usage and sophisticated language suitable for academic writing. Assignments must be completed within a designated framework. **Students are required to take the AP Exam in May to receive the AP designation.**

ENGLISH III HONORS

Grade 11, Course #2233 Q.P. 1.10 1.00 Credit

This course is designed for those students who have opted out of taking AP Language and Composition and are considering technical school or college after graduation. While College Prep English is designed to prepare students to attend college courses, Honors is designed more like an actual college course. Much of the class focuses on American Literature from pre- Colonial up through the present day. Students will read, view, analyze, and discuss a variety of informational and literary texts. The writing is more intensive, and the reading is more extensive than in a regular English class.

ENGLISH III

Grade 11, Course #2203 Q.P. 1.00 1.00 Credit

Students will review and sharpen grammar, writing, and research skills leading to the development of stronger compositions. The study of literature, with a strong focus on American writings, is used to develop critical thinking and writing skills. Nonfiction materials are used for research papers and projects. Students will also identify and analyze literary elements and examine journalistic styles. Again, regular homework and shop week homework play a large part in this class.

Differentiated Sections

Course ID: #2223 The curriculum content is parallel to the course description of *English III* and taught by Special Education instructors. Students will be selectively scheduled into this small group course based on individualized learning needs.	**Course ID: #2213** The curriculum content is parallel to the course description of *English III* and is Special Education supported.	**Course ID: #2063** The curriculum content is parallel to the course description of *English III* and taught by Special Education instructors. Students will be selectively scheduled into this small group course based on individualized learning needs.

GRADE 12 COURSE OFFERINGS

AP ENGLISH LITERATURE AND COMPOSITION

Grade 12, Course #2344 Q.P. 1.20 1.00 Credit

Seniors with college aspirations are best suited for this advanced literature course. Students will engage in careful reading and analysis of a challenging set of literary works from a range of genres including the novel, short story, poetry, and drama. The focus of the course will be on intensive reading and discussion of literature, as well as on introducing secondary critical essays for discussion and evaluation. Emphasis will be placed on thoughtful and cogent reading analysis using various theoretical frameworks and devices. Students are expected to be active readers as they analyze and interpret textual detail, establish connections among their observations, and draw logical inferences leading toward an interpretive conclusion. Students will read, write and discuss poetry, fiction, and drama at an advanced college level while using online resources to develop skills including sophisticated use of literary elements and terminology, close readings of various texts, creating, drafting, and editing college level analytical essays, preparing and writing timed essays, and advanced use and mastery of standard English. This course also prepares students for the Advanced Placement Literature and Composition Exam administered each May. **Students are required to take the AP Exam in May to receive the AP designation.** Those who earn a qualifying score (3 or higher) on the exam are eligible to earn up to one year of college English credit. *Students who did not take AP Language and Composition should have a recommendation from their English teacher and approval from the Department Head.*

ENGLISH IV HONORS

Grade 12, Course #2334 Q.P. 1.10 1.00 Credit

This is the final year of the Honors program. Again, this course moves at the pace of an actual college course. The course load is similar to Honors English III as it introduces students to British Literary themes, writings, and readings. Students focus on both fictional and informational, literary texts including Shakespeare, Chaucer, and others. There is an emphasis on writing papers, deep readings for contextual meanings, and a focus on author's style, diction, and syntax. Great poets, playwrights, and storytellers give students a chance to study, interpret, and look for deeper meanings in literature. Be prepared to work; be prepared to learn.

ENGLISH IV

Grade 12, Course #2204 Q.P. 1.00 1.00 Credit

Students will benefit from a practical approach to both writing and literature. Current literature in the four genres and nonfiction are used to enhance the student's comprehension skills and to develop methods and strategies to interpret what they read. Writing practice focuses on clarity and effective use of language. Projects may include personal essays, reviews, creative writing, and researched reports. Homework, both daily and over shop week, is an important part of the student's grade.

Differentiated Sections

Course ID: #2224	**Course ID for: #2214**	**Course ID: #2064**
The curriculum content is parallel to the course description of *English IV* and taught by Special Education instructors. Students will be selectively scheduled into this small group course based on individualized learning needs.	The curriculum content is parallel to the course description of *English IV* and is Special Education supported.	The curriculum content is parallel to the course description of *English IV* and taught by Special Education instructors. Students will be selectively scheduled into this small group course based on individualized learning needs.

ENGLISH AS A SECOND LANGUAGE

The Grade 9-12 ESL course is designed to empower students with the linguistic skills and cultural competency needed to thrive in an English-speaking academic environment. Tailored to meet the diverse needs of English Language Learners, this comprehensive program focuses on developing proficiency in listening, speaking, reading, and writing. The course also aims to create a supportive and inclusive learning environment where students can flourish academically, linguistically, and culturally. By the end of the program, students will be equipped with the language skills necessary for academic success and future career opportunities.

Curriculum for the Grade 9-12 ESL course includes the National Geographic ***EDGE*** series. ***EDGE*** is a leveled core reading/language arts program designed for ESL students in Grades 9-12 and incorporates the Common Core Standards. It is designed to help prepare ESL students for college and career success with dynamic National Geographic content and authentic multicultural literature.

There are four distinct levels within the ***EDGE*** series that are specific to students' English Language Proficiency Levels:

ESOL Level I Course ID # 8510 0.25 Credit ***EDGE* Fundamentals** – This level is best used for newcomer students or students with a very limited English Language Proficiency Level. Students will learn how to use **Language** to ask for and give information. They will practice describing actions, people, places, and experiences as well as express likes and dislikes, needs and wants, intentions, opinions, ideas, and feelings. They will also learn to make comparisons and engage in discussion. In terms of **Grammar**, students will learn the various parts of speech and sentence types. Students will build **Reading** comprehension skills through vocabulary development, by practicing various reading strategies, and engaging in basic literary analysis. Students will be exposed to poetry and will **Write** expository paragraphs and personal narratives.
ESOL Level II Course ID # 8520 0.25 Credit ***EDGE* Level A** – This level is suitable for students with an English Language Proficiency Level of 1-2 on the WIDA English Language Proficiency scale. Students will use various **Reading Strategies** such as planning and monitoring, making inferences, making connections, synthesizing, and visualizing for multiple genres (short stories, non-fiction text, drama, and poetry). **Grammar** lessons will expand to include subjects and predicates, subject-verb agreement, subject and object pronouns, word order and the present perfect tense. **Writing** tasks will include persuasive and problem-solution essays.
ESOL Level III Course ID # 8530 0.25 Credit ***EDGE* Level B -** This level is for students with an English Language Proficiency Level of 3-4 on the WIDA English Language Proficiency scale. In this course, students will read fiction and nonfiction with a focus on text elements such plot, characterization, setting, viewpoint, and text structure to understand author's purpose. In addition, students will focus on various **Reading Strategies** such as making inferences, making connections, asking questions, and determining importance. **Grammar** lessons will expand to include possessive words, pronoun agreement, infinitives and gerunds, compound and complex sentences, and participles. **Writing** will include examples of an autobiographical narrative, a position paper, and a response to literature.
ESOL Level IV Course ID # 8540 0.25 Credit ***EDGE* Level C -** This level is best suited for students with an English Language Proficiency Level of 5-6 on the WIDA English Language Proficiency scale. Students will hone their **Reading Strategies** for various **Genres.** Planning, monitoring, making inferences, making connections, asking questions, and determining importance will continue to be utilized and practiced. **Grammar** lessons will continue to expand and will include participles and absolutes. **Writing** will continue to include autobiographical narrative, a persuasive essay, and literary analysis.

MATH

GRADE 9 COURSE OFFERINGS

ALGEBRA II HONORS
Grade 9 Course #4831 Q.P. 1.10 1.00 Credit
This course is designed for the highly motivated and exceptional mathematics student who has maintained an 85 average in Algebra I. It is an accelerated course that covers traditional Algebra II topics and incorporates the TI-84 graphing calculator to solve problems.

ALGEBRA I HONORS
Grade 9, Course #4731 Q.P. 1.10 1.00 Credit
This course is designed for motivated students to introduce algebraic skills and provide the foundation for all subsequent math courses using higher order thinking through multi-step applications. The scope and sequence of this course mirrors the general education curriculum while challenging students by offering a rigorous learning environment.

ALGEBRA I
Grade 9 Course #4701 Q.P. 1.00 1.00 Credit
This course focuses on the key topics that provide a strong foundation in algebra. It is an in-depth introduction of variables, constants, expressions and equations. Topics covered are: solving equations, simplifying expressions, understanding order of operations, using properties, arithmetic operations with positive and negative numbers, polynomials, factoring, graphing (linear and quadratic equations), working with radicals and expanding arithmetic knowledge.

Differentiated Sections

Course ID: #4721	**Course ID: #4711**	**Course ID: #4761**
The curriculum content is parallel to the course description of *Algebra I* and taught by Special Education instructors. Students will be selectively scheduled into this small group course based on individualized learning needs.	The curriculum content is parallel to the course description of *Algebra I* and is team-taught by Special Education and Math instructors.	The curriculum content is parallel to the course description of *Algebra I* and taught by Special Education instructors. Students will be selectively scheduled into this small group course based on individualized learning needs.

GRADE 10 COURSE OFFERINGS

GEOMETRY HONORS
Grade 10, Course #4932 Q.P. 1.10 1.00 Credit

Honors Geometry is an accelerated course for students who need to develop an understanding of dimensional concepts while building upon their strong foundation of Algebraic topics. Students will gain knowledge for Geometry as a pure, Mathematics discipline while being offered opportunities to apply this knowledge to real world problems. Emphasis is centered on the nature of proof to challenge students and strengthen their logic-based thinking.

GEOMETRY
Grade 10, Course #4902 Q.P. 1.00 1.00 Credit

Geometry is the study of two- and three-dimensional figures while incorporating applications from Algebra. Students will acquire and demonstrate knowledge of theorems and definitions while developing computational skills and strategies needed to problem solve. Students will be required to think visually and develop critical thinking and decision-making skills while transferring information to real life problems.

Differentiated Sections

Course ID: #4922	**Course ID: #4912**	**Course ID: #4962**
The curriculum content is parallel to the course description of *Geometry* and taught by Special Education instructors. Students will be selectively scheduled into this small group course based on individualized learning needs.	The curriculum content is parallel to the course description of *Geometry* and is team-taught by Special Education and Math instructors.	The curriculum content is parallel to the course description of *Geometry* and taught by Special Education instructors. Students will be selectively scheduled into this small group course based on individualized learning needs.

GRADE 11 COURSE OFFERINGS

AP PRE-CALCULUS
Grade 11, Course #4443 Q.P. 1.20 1.00 Credit
Throughout this course, students develop and hone symbolic manipulation skills, including solving equations and manipulating expressions for the many function types. Students also learn that functions and their compositions, inverses, and transformations are understood through graphical, numerical, analytical, and verbal representations, which reveal different attributes of the functions and are useful for solving problems in mathematical and applied contexts. In turn, the skills learned in this course are widely applicable to situations that involve quantitative reasoning. **Students are required to take the AP Exam in May to receive the AP designation.**

PRE-CALCULUS HONORS
Grade 11, Course #4433 Q.P. 1.10 1.00 Credit
This rigorous college-level course features an in-depth systematic study of each class of functions—algebra, exponential, logarithmic, and trigonometric—along with vigorous problems involving applications and proofs. It is designed for the over-achiever in mathematics. A solid mathematics background is required to register for this course.

ALGEBRA II HONORS
Grade 11 Course # 4833 Q.P. 1.10 1.00 Credit
This course is designed for the highly motivated and exceptional mathematics student. It is an accelerated course that covers traditional Algebra II topics such as functions (including polynomial, rational, exponential, and logarithmic), quadratic equations, systems of equations, inequalities, radical expressions, matrices, transformations of graphs, and advanced factoring. Students will use a TI 84 graphing calculator to solve problems.

ALGEBRA II
Grade 11, Course # 4803 Q.P. 1.00 1.00 Credit
This course covers the traditional Algebra II topics such as functions (including polynomial, rational, exponential, and logarithmic), quadratic equations, systems of equations, inequalities, radical expressions, matrices, transformations of graphs, and advanced factoring; this course is open to students who have successfully completed Algebra I and Geometry.

PRECALCULUS SUMMER ACCELERATION COURSE
#8413 1.00 Credit
Throughout this course, students develop and hone symbolic manipulation skills, including solving equations and manipulating expressions for the many function types. Students also learn that functions and their compositions, inverses, and transformations are understood through graphical, numerical, analytical, and verbal representations, which reveal different attributes of the functions and are useful for solving problems in mathematical and applied contexts. This course aims to cover Trigonometry and Precalculus topics from April to August. Students will master trig topics and must pass a test midway through the course to continue to take the rest of the course. In turn, the skills learned in this course are widely applicable to situations that involve quantitative reasoning and prepare students for AP Calculus.

Differentiated Sections

Course ID: #4823 This course is an introduction to *Algebra II* taught by Special Education instructors. Students will be selectively scheduled into this small group course based on individualized learning needs.	**Course ID: #4813** The curriculum content is parallel to the course description of *Algebra II* and is team-taught by Special Education and Math instructors.	**Course ID: #4863** The curriculum content is parallel to the course description of *Algebra II* with a core focus on reinforcement of algebraic concepts. Students will be selectively scheduled into this small group course based on individualized learning needs.

GRADE 12 COURSE OFFERINGS

AP CALCULUS

Grade 12, Course #4644 Q.P. 1.20 1.00 Credit

AP Calculus AB focuses on students' understanding of calculus concepts and provides experience with methods and applications. Through big ideas of calculus (e.g., modeling change, approximation and limits, and analysis of functions), each course becomes a cohesive whole, rather than a collection of unrelated topics. Both courses require students to use definitions and theorems to build arguments and justify conclusions. The courses feature a multi-representational approach to calculus, with concepts, results, and problems expressed graphically, numerically, analytically, and verbally. Exploring connections among these representations builds understanding of how calculus applies limits to develop important ideas, definitions, formulas, and theorems. A sustained emphasis on clear communication of methods, reasoning, justifications, and conclusions is essential. Teachers and students should regularly use technology to reinforce relationships among functions, to confirm written work, to implement experimentation, and to assist in interpreting results. **Students are required to take the AP Exam in May to receive the AP designation.**

AP STATISTICS

Grade 12, Course #4144 Q.P. 1.20 1.00 Credit

The AP Statistics course introduces students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. There are four themes evident in the content, skills, and assessment in the AP Statistics course: exploring data, sampling and experimentation, probability and simulation, and statistical inference. Students use technology, investigations, problem solving, and writing to build conceptual understanding. - College Board. A graphing calculator is required for this course. **Students are required to take the AP Exam in May to receive the AP designation.**

AP PRE-CALCULUS

Grade 12, Course # 4444 Q.P. 1.20 1.00 Credit

Throughout this course, students develop and hone symbolic manipulation skills, including solving equations and manipulating expressions, for the many function types throughout the course. Students also learn that functions and their compositions, inverses, and transformations are understood through graphical, numerical, analytical, and verbal representations, which reveal different attributes of the functions and are useful for solving problems in mathematical and applied contexts. In turn, the skills learned in this course are widely applicable to situations that involve quantitative reasoning. **Students are required to take the AP Exam in May to receive the AP designation.**

PRE-CALCULUS HONORS

Grade 12, Course #4434 Q.P. 1.10 1.00 Credit

This rigorous college-level course features an in-depth systematic study of each class of functions—algebra, exponential, logarithmic, and trigonometric—along with vigorous problems involving applications and proofs. It is designed for the over-achiever in mathematics. A solid mathematics background is required to register for this course.

STATISTICS

Grade 12, Course #4104 Q.P. 1.00 1.00 Credit

This course is designed for students who have passed Algebra I and successfully passed state-mandated testing requirements. The focus is the study of the principles of statistical reasoning. Students will learn to analyze data and sharpen their critical thinking skills to make appropriate conclusions based on data. Students will master the statistical process by analyzing data through the lens of professional sports and other high-impact, real-world applications.A graphing calculator is required for this course.

FINANCIAL ALGEBRA

Grade 12, Course #4504 Q.P. 1.00 1.00 Credit

This algebra-based math class is focused on financial life after high school. The topics covered are spending habits, banking, credit, loans, employment, taxes, independent living, and investing. This is a project-based learning course.

Differentiated Sections

Course ID: #4524	**Course ID: #4514**	**Course ID: #4564**
The curriculum content is parallel to the course description of *Financial Algebra* and taught by Special Education instructors. Students will be selectively scheduled into this small group course based on individualized learning needs.	The curriculum content is parallel to the course description of *Financial Algebra* and is Special Education supported.	The curriculum content is parallel to the course description of *Financial Algebra II* with additional interventions. Students will be selectively scheduled into this small group course based on individualized learning needs.

HEALTH/PHYSICAL EDUCATION

GRADE 9 COURSE OFFERINGS

Physical Education I/Health I

Grade 9, Course #7211/7221 Q.P. 1.00 .50 Credit

This class requires students to be physically active and to socially interact with their classmates and teacher. Students participate in a variety of activities including large group, small group, individual sports, and fitness testing. Activities include team and lifetime sports such as football, speedball, floor hockey, backyard games, disc golf, badminton, Frisbee, volleyball, basketball, strength, endurance and flexibility training.

Health Education I is designed to give students the knowledge and skills they need to lead productive lives. Health topics will include but are not limited: health fundamentals and skills, building mental and emotional health, stress and coping strategies, social health, human development, and pregnancy prevention.

GRADE 10 COURSE OFFERINGS

Physical Education II/Health II

Grade 10, Course #7212/7222 Q.P. 1.00 .50 Credit

This class requires students to be physically active and to socially interact with their classmates and teacher. Students participate in a variety of activities including large group, small group, individual sports, and fitness testing. Activities include team and lifetime sports such as football, speedball, floor hockey, backyard games, team building activities disc golf, badminton, frisbee, volleyball, basketball, strength, endurance and flexibility training.

Health Education II is designed to give students the knowledge and skills they need to lead a productive life. Health Topics include but are not limited to: safety, violence, food, nutrition, physical activity, tobacco, alcohol, vaping, drugs, personal health and wellness, STIs and pregnancy.

SCIENCE

GRADE 9 COURSE OFFERINGS

BIOLOGY HONORS

Grade 9, Course #6131 Q.P. 1.10 1.00 Credit

This course is designed for academically advanced students who are motivated to achieve an in-depth and comprehensive understanding of biological principles and processes. A variety of inquiry-based and laboratory-based methods will be emphasized to help students develop innovative critical-thinking and problem-solving skills. Students are expected to apply their knowledge and skill on biological and technical levels in cellular biology, genetics, evolution, ecology, microorganisms, invertebrates, vertebrates, and human biology. Significant MCAS preparation is also emphasized.

The course focuses on major life processes. Each process is discussed using a variety of examples from all types of living things but with particular attention given to humans. In this way, students gain insight into how all organisms, including themselves, carry out the same live functions. The course is aligned with the NGSS for Biology, which include: General Principles of Biology, Chemistry of Life, Genetics & Heredity, Cell Biology, Anatomy and Physiology, and Evolution and Ecology. Significant MCAS preparation is also emphasized.

BIOLOGY

Grade 9, Course #6101 Q.P. 1.00 1.00 Credit

Biology is the study of living things, and living things are part of everyday experiences. Students gain insight into how all organisms, including themselves, carry out the same live functions. The course is aligned with the NGSS for Biology, which include: General Principles of Biology, Chemistry of Life, Genetics & Heredity, Cell Biology, Anatomy and Physiology, and Evolution and Ecology. Significant MCAS preparation is also emphasized.

Differentiated Sections

Course ID: #6421	**Course ID: #6111**
The curriculum content is parallel to the course description of *Biology* and taught by Special Education instructors. Students will be selectively scheduled into this small group course based on individualized learning needs.	The curriculum content is parallel to the course description of *Biology* and is team-taught by Special Education and science instructors.

GRADE 10 COURSE OFFERINGS

AP BIOLOGY
Grade 10, Course #6142 Q.P. 1.20 Credit 1.0
This is an introductory college-level biology course. In this course, students cultivate their understanding of biology through inquiry-based investigations as they explore major concepts that govern living organisms: evolution, energy and homeostasis, genetics, and interactions between systems. Skills developed in this course include designing experiments and procedures to test a prediction or theory, collecting and analyzing data, interpreting data to draw conclusions, and developing and supporting scientific claims with evidence. **Students are required to take the AP Exam in May to receive the AP designation.**

ENGINEERING THE FUTURE HONORS
Grade 10, Course # 6332 Q.P. 1.10 Credit 1.0
Engineering the Future: Science, Technology, and the Design Process™ is a full-year course where students take a hands-on approach to understanding the principles of technology and engineering design. Students learn how science, technology, engineering, and math have real-world applications and how engineering will shape the future. Students need to be proficient in Algebra I to succeed in this course.

CHEMISTRY
Grade 10, Course #6702 Q.P. 1.00 Credit 1.0
General Chemistry introduces the student to the basic principles of general chemistry while promoting critical thinking. Topics include atomic structure, stoichiometry, periodic law, measurement, chemical reactions, bonding, solutions, gases, acids and bases. Students will understand the language of chemistry and symbolic relationships that will allow them to perform labs to investigate the theoretical topics presented in class. Mathematics is the foundation of chemistry and basic understanding of math and algebra is desired. Main topics presented in this course are the properties of matter, the periodic table, "factor-label" method, problem solving, the atom and sub-atomic particles, scientific notation, physical and chemical properties/ changes, chemical formulas and reactions, the "mole" concept, stoichiometry, reaction rates, and acid base reactions. *Students who enroll in this course should demonstrate proficiency in Algebra I (85% or higher).*

ENGINEERING THE FUTURE
Grade 10, Course #6302 Q.P. 1.0 Credit 1.0
Engineering the Future: Science, Technology, and the Design Process™ is a full-year course where students take a hands-on approach to understanding the principles of technology and engineering design. Students learn how science, technology, engineering, and math have real-world applications and how engineering will shape the future.

Differentiated Sections

Course ID: #6422 The curriculum content is parallel to the course description of *Biology II* and taught by Special Education instructors. Students will be selectively scheduled into this small group course based on individualized learning needs. **Students will be eligible to take the Biology MCAS exam at the end of this course.**	**Course ID: #6312** The curriculum content is parallel to the course description of *Engineering the Future* and is Special Education supported.
Course ID: #6712 The curriculum content is parallel to the course description of *Chemistry* and is Special Education supported.	

GRADE 11 COURSE OFFERINGS

All courses run based on enrollment.

AP ENVIRONMENTAL SCIENCE
Grade 11, Course #6643 Q.P. 1.20 Credit 1.0

The goal of the AP Environmental Science course is to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving or preventing them. Environmental science is interdisciplinary, embracing a wide variety of topics from different areas of study. Yet there are several major unifying constructs that cut across the many topics included in the study of environmental science: science is a method of learning more about the world, energy conversions underlie all ecological processes, the earth itself is one interconnected system, humans alter natural systems, and human survival depends on developing practices that will achieve sustainable systems. **Students are required to take the AP Exam in May to receive the AP designation.**

CHEMISTRY HONORS
Grade 11, Course #6733 Q.P. 1.10 Credit 1.0

This course is designed for students who excel in math and science. The course follows the same textbook as General Chemistry but moves at a faster pace with more challenging labs and assignments. Honors Chemistry introduces the student to the basic principles of general chemistry while promoting critical thinking in a challenging environment. Topics include atomic structure, stoichiometry, periodic law, measurement, chemical reactions, bonding, solutions, gases acids and bases, thermochemistry and electrochemistry. Students will understand the language of chemistry and symbolic relationships that will allow them to perform labs to investigate the theoretical topics presented in class. Mathematics is the foundation of chemistry and basic understanding of math and algebra is desired. Main topics presented in this course are the properties of matter, the periodic table, "factor-label" method, problem solving, the atom and sub-atomic particles, scientific notation, physical and chemical properties/ changes, chemical formulas and reactions, the "mole" concept, stoichiometry, reaction rates, and acid base reactions. *Students who enroll in this course should demonstrate* p*roficiency in Algebra I (85% or higher).*

CHEMISTRY
Grade 11, Course #6703 Q.P. 1.00 Credit 1.0

General Chemistry introduces the student to the basic principles of general chemistry while promoting critical thinking. Topics include atomic structure, stoichiometry, periodic law, measurement, chemical reactions, bonding, solutions, gases, acids and bases. Students will understand the language of chemistry and symbolic relationships that will allow them to perform labs to investigate the theoretical topics presented in class. Mathematics is the foundation of chemistry and basic understanding of math and algebra is desired. Main topics presented in this course are the properties of matter, the periodic table, "factor-label" method, problem solving, the atom and sub-atomic particles, scientific notation, physical and chemical properties/ changes, chemical formulas and reactions, the "mole" concept, stoichiometry, reaction rates, and acid base reactions. *Students who enroll in this course should demonstrate* p*roficiency in Algebra I (85% or higher).*

APPLIED CHEMISTRY
Grade 11, Course #6903 Q.P. 1.00 1.00 Credit

Applied Chemistry is designed to provide students with a practical understanding of chemical concepts in real-world scenarios. This course is accessible to a broad range of learners and emphasizes the application of chemical principles in everyday life. Topics covered include basic atomic structure, bonding, and the properties of common substances. Laboratory work focuses on hands-on applications, and critical thinking is limited to essential problem-solving skills. The pace is intentionally slower, allowing for a more in-depth exploration of foundational concepts. Applied Chemistry is suitable for students with diverse learning styles and interests, providing a solid foundation for those pursuing non-STEM pathways.

ANATOMY AND PHYSIOLOGY HONORS

Grade 11, Course #6833 Q.P. 1.10 Credit 1.00
This is an intensive course that investigates the major organ systems of the human body. This course will cover homeostasis, anatomical/directional terms, and histological classification. Systems covered will be the integumentary, skeletal, muscular and nervous systems. Anatomy will identify the individual parts of each system and physiology will relate the function to the system. Students will understand these organ systems and how they help to maintain the body's overall health. *Students who enroll in this course should demonstrate proficiency in Biology (85% or higher).*

ANATOMY AND PHYSIOLOGY
Grade 11, Course #6803 Q.P. 1.00 Credit 1.00
This course investigates the major organ systems of the human body. This course will cover homeostasis, anatomical/directional terms, and histological classification. Systems covered will be the integumentary, skeletal, muscular and nervous systems. Anatomy will identify the individual parts of each system and physiology will relate the function to the system. Students will understand these organ systems and how they help to maintain the body's overall health.

ENVIRONMENTAL SCIENCE
Grade 11, Course #6403 Q.P. 1.00 Credit 1.00
This lab based course that deals with the study of the impact of humans and the environment. Topics of study will include ecology, ecosystems, structure of the Earth and its atmosphere, biomes, populations, biodiversity, water, land and air pollution, food and agriculture, renewable and nonrenewable resources, and how the environment affects health, economics, policies, and the future.

Differentiated Sections

Course ID: #6423 The curriculum content is parallel to the course description of *Environmental Science* and taught by Special Education instructors. Students will be selectively scheduled into this small group course based on individualized learning needs.	**Course ID: #6413** The curriculum content is parallel to the course description of *Environmental Science* and is Special Education supported.	**Course ID: #6813** The curriculum content is parallel to the course description of *Anatomy and Physiology* and is Special Education supported.	**Course ID: #6913** The curriculum content is parallel to the course description of *Applied Chemistry* and is Special Education supported.
			Course ID: #6713 The curriculum content is parallel to the course description of *Chemistry* and is Special Education supported.

GRADE 12 COURSE OFFERINGS

All courses run based on enrollment.

AP ENVIRONMENTAL SCIENCE
Grade 12, Course #6644 Q.P. 1.20 Credit 1.0
The goal of the AP Environmental Science course is to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving or preventing them. Environmental science is interdisciplinary, embracing a wide variety of topics from different areas of study. Yet there are several major unifying constructs that cut across the many topics included in the study of environmental science: science is a method of learning more about the world, energy conversions underlie all ecological processes, the earth itself is one interconnected system, humans alter natural systems, and human survival depends on developing practices that will achieve sustainable systems. **Students are required to take the AP Exam in May to receive the AP designation.**

AP PHYSICS
Grade 12, Course #6244 Q.P. 1.20 1.00 Credit
This is an accelerated course in the study of physics that goes above and beyond the standard topics of study. The course follows the AP curriculum provided by the College Board with the goal of preparing students to take the AP Physics I standardized exam at the end of the year. Students will study force, motion, momentum, energy, power, rotational dynamics, torque, waves and oscillations, electrostatics, and DC circuits in great depth and with a focus on conceptual problem solving. Laboratory experiments will be performed routinely to demonstrate and provide evidence for these concepts. Students will attend extra study sessions, participate in a mock AP exam, and take the national AP Physics I exam at the completion of the course. *To be successful in this course, students must be proficient in Algebra II.* **Students are required to take the AP Exam in May to receive the AP designation.**

ANATOMY AND PHYSIOLOGY HONORS
Grade 12, Course #6834 Q.P. 1.10 Credit 1.00
This is an intensive course that investigates the major organ systems of the human body. This course will cover homeostasis, anatomical/directional terms, and histological classification. Systems covered will be the integumentary, skeletal, muscular and nervous systems. Anatomy will identify the individual parts of each system and physiology will relate the function to the system. Students will understand these organ systems and how they help to maintain the body's overall health. *Students who enroll in this course should demonstrate proficiency in Biology (85% or higher).*

ANATOMY AND PHYSIOLOGY
Grade 12, Course #6804 Q.P. 1.00 Credit 1.00
This course investigates the major organ systems of the human body. This course will cover homeostasis, anatomical/directional terms, and histological classification. Systems covered will be the integumentary, skeletal, muscular and nervous systems. Anatomy will identify the individual parts of each system and physiology will relate the function to the system. Students will understand these organ systems and how they help to maintain the body's overall health.

ENVIRONMENTAL SCIENCE
Grade 12, Course #6504 Q.P. 1.00 Credit 1.00
This lab based course that deals with the study of the impact of humans and the environment. Topics of study will include ecology, ecosystems, structure of the Earth and its atmosphere, biomes, populations, biodiversity, water, land and air pollution, food and agriculture, renewable and nonrenewable resources, and how the environment affects health, economics, policies, and the future.

CHEMISTRY HONORS
Grade 12, Course #6734 Q.P. 1.10 Credit 1.00
This course is designed for students who excel in math and science. The course follows the same textbook as General Chemistry but moves at a faster pace with more challenging labs and assignments. Honors Chemistry introduces the student

to the basic principles of general chemistry while promoting critical thinking in a challenging environment. Topics include atomic structure, stoichiometry, periodic law, measurement, chemical reactions, bonding, solutions, gases acids and bases, thermochemistry and electrochemistry. Students will understand the language of chemistry and symbolic relationships that will allow them to perform labs to investigate the theoretical topics presented in class. Mathematics is the foundation of chemistry and basic understanding of math and algebra is desired. Main topics presented in this course are the properties of matter, the periodic table, "factor-label" method, problem solving, the atom and sub-atomic particles, scientific notation, physical and chemical properties/ changes, chemical formulas and reactions, the "mole" concept, stoichiometry, reaction rates, and acid base reactions. *Students who enroll in this course should demonstrate* p*roficiency in Algebra I (85% or higher).*

CHEMISTRY
Grade 12, Course #6704 Q.P. 1.00 Credit 1.00
This course is designed to foster student understanding of the language of chemistry and symbolic relationships that will allow them to perform labs to investigate the theoretical topics presented in class. Mathematics is the foundation of chemistry and basic understanding of math and algebra is desired. Main topics presented in this course are the properties of matter, the periodic table, "factor-label" method, problem solving, the atom and subatomic particles, scientific notation, physical and chemical properties/ changes, chemical formulas and reactions, the "mole" concept, stoichiometry, reaction rates, and acid base reactions. *Students who enroll in this course should demonstrate* p*roficiency in Algebra I (85% or higher).*

APPLIED CHEMISTRY
Grade 12, Course #6904 Q.P. 1.00 1.00 Credit

Applied Chemistry is designed to provide students with a practical understanding of chemical concepts in real-world scenarios. This course is accessible to a broad range of learners and emphasizes the application of chemical principles in everyday life. Topics covered include basic atomic structure, bonding, and the properties of common substances. Laboratory work focuses on hands-on applications, and critical thinking is limited to essential problem-solving skills. The pace is intentionally slower, allowing for a more in-depth exploration of foundational concepts. Applied Chemistry is suitable for students with diverse learning styles and interests, providing a solid foundation for those pursuing non-STEM pathways.

PHYSICS HONORS
Grade 12, Course #6234 Q.P. 1.10 Credit 1.00
This course is designed for students who excel in math and science.This algebra-based physics course explores fundamental principles governing the universe, emphasizing critical thinking and mathematical problem-solving. Students will investigate force, motion, momentum, energy, light, waves, electricity, magnetism, and radioactivity. The course focuses heavily on developing skills in variable manipulation, equation interpretation, and applying algebraic techniques to complex physical problems. Through theoretical study, challenging problem sets, and laboratory experiments, students will enhance their analytical abilities and gain a deep understanding of mathematical models in physics. This course aims to cultivate strong quantitative reasoning skills, preparing students for advanced studies in STEM fields and equipping them to critically evaluate scientific claims using algebraic tools. *Students who enroll in this course should demonstrate* p*roficiency in Algebra II (85% or higher).*

PHYSICS
Grade 12, Course #6204 Q.P. 1.00 Credit 1.00
This algebra-based physics course explores fundamental principles governing the universe, emphasizing critical thinking and mathematical problem-solving. Students will investigate force, motion, momentum, energy, light, waves, electricity, magnetism, and radioactivity. The course focuses heavily on developing skills in variable manipulation, equation interpretation, and applying algebraic techniques to complex physical problems. Through theoretical study, challenging problem sets, and laboratory experiments, students will enhance their analytical abilities and gain a deep understanding of mathematical models in physics. This course aims to cultivate strong quantitative reasoning skills, preparing students for advanced studies in STEM fields and equipping them to critically evaluate scientific claims using algebraic tools. *Students who enroll in this course should demonstrate* p*roficiency in Algebra I (85% or higher).*

APPLIED PHYSICS
Grade 12, Course # 6664 Q.P. 1.0 Credit 1.00

Applied Physics is an engaging course that explores the fundamental principles governing our universe, emphasizing real-world applications and conceptual understanding over mathematical formulas. Students investigate forces, motion, energy, waves, electricity, magnetism, and radioactivity through hands-on experiments and relatable examples. This approach develops critical thinking and scientific inquiry skills while fostering appreciation for physics in everyday life. By course end, students gain a solid conceptual foundation, enabling them to better understand the world and physics' role in vocational disciplines. Ideal for curious minds seeking an accessible, application-focused exploration of how things work.

Differentiated Sections

Course ID: #6924 The curriculum content is parallel to the course description of *Applied Chemistry* and taught by Special Education instructors. Students will be selectively scheduled into this small group course based on individualized learning needs.	**Course ID: #6714** The curriculum content is parallel to the course description of *Chemistry* and is Special Education supported.	**Course ID: #6214** The curriculum content is parallel to the course description of *Physics* and is Special Education supported.
Course ID: #6914 The curriculum content is parallel to the course description of *Applied Chemistry* and is Special Education supported.	**Course ID: #6614** The curriculum content is parallel to the course description of *Applied Physics* and is Special Education supported.	**Course ID: #6814** The curriculum content is parallel to the course description of *Anatomy and Physiology* and is Special Education supported.

SOCIAL STUDIES

GRADE 9 COURSE OFFERINGS

U.S. HISTORY I HONORS

Grade 9, Course #5131 Q.P. 1.10 1.00 Credit

The course is offered to motivated students who have an interest in outside readings, project work and working at an accelerated classroom pace. Students will study individuals and events that shaped American affairs from c. 1770s to c. 1850s. Students will be able to explain the basic issues that led to the creation of the U.S. and its government as well as the issues leading to the ratification of the Constitution. Students will also explore issues and events in the early Republic, the industrial revolution and westward expansion. Students will be able to summarize the major events in American history that led to the development of modern America by making connections between historical events and today. A variety of primary and secondary sources from multiple perspectives are used in the course.

U.S. HISTORY I

Grade 9, Course #5101 Q.P. 1.00 1.00 Credit

Students will study individuals and events that shaped American affairs from c. 1770s to c. 1850s. Students will be able to explain the creation of the U.S. and its government, the issues leading to the ratification of the Constitution, and the major events in American history that led to the development of modern America by making connections between historical events and today. A variety of primary and secondary sources from multiple perspectives are used in the course.

Differentiated Sections

Course ID: # 5121 The curriculum content is parallel to the course description of *U.S. History I* and taught by Special Education instructors. Students will be selectively scheduled into this small group course based on individualized learning needs.	**Course ID: #5111** The curriculum content is parallel to the course description of *U.S. History I* and is Special Education supported.

GRADE 10 COURSE OFFERINGS

U.S. HISTORY II HONORS

Grade 10, Course #5132 Q.P. 1.10 1.00 Credits

With teacher recommendations, students who have an interest in United States History and want to enhance their knowledge through reports, class projects and outside readings as well as an accelerated classroom approach should consider taking this course. Students will study individuals and events that shaped American affairs from c. 1860s to c. 1900s. Key topics include factors contributing to the onset of the American Civil War, the issues surrounding the Reconstruction Era, American expansionism and territorial gains, and the impact/effects of the Second Industrial Revolution and World War 1. Students will be able to summarize the major events in American history that led to the development of modern America by making connections between historical events and today. A variety of primary and secondary sources from multiple perspectives are used in the course.

U.S. HISTORY II

Grade 10, Course #5102 Q.P. 1.00 1.00 Credit

Students will study individuals and events that shaped American affairs from c. 1860s to c. 1900s. Key topics include factors contributing to the onset of the American Civil War, the issues surrounding the Reconstruction Era, American expansionism and territorial gains, and the impact/effects of the Second Industrial Revolution and World War 1. Students will be able to summarize the major events in American history that led to the development of modern America by making connections between historical events and today. A variety of primary and secondary sources from multiple perspectives are used in the course.

Differentiated Sections

Course ID: #5122	**Course ID: # 5112**
The curriculum content is parallel to the course description of *U.S. History I* and taught by Special Education instructors. Students will be selectively scheduled into this small group course based on individualized learning needs.	The curriculum content is parallel to the course description of *U.S. History I* and is Special Education supported.

GRADE 11 COURSE OFFERINGS

MODERN WORLD HISTORY HONORS

Grade 11, Course #5333 Q.P. 1.10 .50 Credit

With teacher recommendations, students that have an interest in Modern World History and want to enhance their knowledge through reports, class projects and outside readings, along with an accelerated classroom approach, should consider taking this course. This course examines the major philosophical, social, political and economic trends in the modern world. Key topics covered include an understanding of the major individuals and events that shaped world affairs from the 1900s to the present. Global issues and developments as well as the rise of the United States as a world power will also be incorporated into this course.

MODERN WORLD HISTORY

Grade 11, Course #5303 Q.P. 1.00 .50 Credit

This course examines the major philosophical, social, political and economic trends in the modern world. Key topics covered include an understanding of the major individuals and events that shaped world affairs from the 1900s to the present. Global issues and developments as well as the rise of the United States as a world power will also be incorporated into this course.

Differentiated Sections

Course ID: # 5323 The curriculum content is parallel to the course description of *Modern World History* and taught by Special Education instructors. Students will be selectively scheduled into this small group course based on individualized learning needs.	**Course ID: #5313** The curriculum content is parallel to the course description of *Modern World History* and is Special Education supported.

GRADE 12 COURSE OFFERINGS

LAW & SOCIETY HONORS

Grade 12, Course #5634 Q.P. 1.10 .50 Credit

This accelerated course is designed for students seeking an in-depth, analytical exploration of law as it functions in everyday life. Students examine how legal systems shape individual rights, responsibilities, and social order through the study of criminal law, civil law, consumer law, family law, and constitutional freedoms. Emphasis is placed on real-world legal issues, case analysis, and the application of legal principles to contemporary situations. Students will analyze how laws are created, interpreted, and enforced, and how legal decisions impact individuals, families, and communities. Through discussion, problem-solving scenarios, and inquiry-based activities, students develop advanced critical thinking and reasoning skills necessary to evaluate legal questions in a democratic society.

LAW & SOCIETY

Grade 12, Course #5604 Q.P. 1.00 .50 Credit

This course introduces students to the role of law in society and its direct impact on everyday life. Students explore foundational legal concepts including the court system, criminal law, juvenile justice, civil disputes, consumer rights, family law, and individual freedoms guaranteed by the Constitution. Students will examine how laws regulate behavior, resolve conflicts, and protect rights, while also considering contemporary legal issues that affect individuals and communities. The course emphasizes practical legal knowledge, critical thinking, and informed citizenship, preparing students to understand their rights and responsibilities in a complex legal system.

Differentiated Sections

Course ID: # 5624	**Course ID: # 5614**
The curriculum content parallels the *Law & Society* course and is delivered by Special Education instructors in a small-group setting. Instruction supports individualized learning needs through modified pacing, structured guidance, and targeted skill development while maintaining alignment with core legal concepts and course outcomes. Students are scheduled into this course based on individualized education plans and learning needs.	The curriculum content parallels the *Law & Society* course and is delivered with Special Education support. Students engage with the same core legal topics, including criminal law, civil law, consumer law, family law, and individual rights, while receiving additional instructional support and scaffolding as needed. This course emphasizes practical legal understanding and real-world application within a supported learning environment.

ADVANCED COURSEWORK AND ENRICHMENT OPPORTUNITIES

FOREIGN LANGUAGE

SPANISH I

Grades 9-12, Course #8290

Spanish I is a full-year course where students in grades 9 through 12 may begin their study of the Spanish language and cultures. Students concentrate on speaking in the target language, studying vocabulary and grammatical structures, and learning about the cultures and traditions of the many Spanish-speaking countries in the world. Each unit covers basic vocabulary, conjugation of verbs both regular and irregular, and interaction using visual and verbal content.

SPANISH II

Grades 9-12, Course #8291

Spanish II is a full-year course where students in grades 9 through 12 may continue their study of the Spanish language and cultures. Students concentrate on speaking in the target language, studying vocabulary and grammatical structures, and learning about the cultures and traditions of the many Spanish-speaking countries in the world. Each unit covers vocabulary, conjugation of verbs both regular and irregular, and interaction using visual and verbal content. In Spanish II, there is an emphasis on accurate oral and appropriate written use of the language.

VOCATIONAL SHOP DESCRIPTION GUIDE

ADVANCED MANUFACTURING

ADVANCED MANUFACTURING I **Grade 9** **Course #0841 Q.P. 1.00 3.50 Credits** The freshmen will learn the basics of lathe, milling machine, grinder, waterjet, laser, and drill press operation. They will apply the basic math, measurement and blueprint skills learned in the related program to the production of machined parts in shop. The student will learn the application of machine, hand, and power tools that are studied in related theory. The student will also apply basic information concerning heat treatment and metal identification. Most importantly, the student will learn the safety practices needed in a machine shop environment.	**ADVANCED MANUFACTURING RELATED THEORY I** **Grade 9** **Course #1841 Q.P. 1.00 1.00 Credit** The freshmen will learn hand tool, measuring tool, and machine tool identification and use. The student will also learn shop math as applied to the job and focus primarily on basic blueprint reading and sketching. The student will learn the theories of properly and safely removing stock through the use of varied machine tools. The student will also learn the metal manufacturing process and basic metallurgy.
ADVANCED MANUFACTURING II **Grade 10** **Course #0842 Q.P. 1.00 3.50 Credits** The sophomores will learn advanced lathe, milling machine, grinder, waterjet, laser, and drill press operation. In addition, they will learn basic operations of E.D.M. and C.N.C. milling and turning centers. They will apply the more advanced math and blueprint skills learned in the related program to the production of machined parts in the shop. The student will begin the process of unit production in the form of tools that can be used by the student when entering the trade such as hammers, vises, and fixtures. The concept of multi-level production will be introduced and short production runs will be done by the students and organized by the upperclassmen.	**ADVANCED MANUFACTURING RELATED THEORY II** **Grade 10** **Course #1842 Q.P. 1.00 1.00 Credit** Sophomores will learn advanced tooling used on basic machine tools. Production planning will be taught to efficiently produce machined parts on machine tools. An introduction to the use of CAD/CAM and 3D parametric modeling software will comprise a major portion of the course. Basic concepts of CNC programming will also be taught with emphasis on the use of proper tooling for the given job. Additionally, students will create a resume and reference sheet and explore employability and entrepreneurship skills as they apply to the manufacturing industry.
ADVANCED MANUFACTURING III **Grade 11** **Course #0843 Q.P. 1.00 4.50 Credits** The juniors will learn in greater depth how to program, set up, and operate CNC machines. The student will create CNC programs in word address G-Code format by using CAD/CAM software. The junior students will organize and	**ADVANCED MANUFACTURING RELATED THEORY III** **Grade 11** **Course #1843 Q.P. 1.00 1.00 Credit** Juniors will learn CNC programming in great depth; they will learn to interpret standard word address characters and programs, and

run more complex production jobs in the shop using underclassmen as machine operators. The students will be introduced to basic tool making, die making, and mold making practices and advanced inspection techniques.	they will learn to create CNC programs using the industry accepted format. Students will also complete projects that build their CAD/CAM and 3D modeling skills. The students will learn advanced blueprint reading and apply it to CNC programming and production projects.
ADVANCED MANUFACTURING IV **Grade 12** **Course #0844 Q.P. 1.00 4.50 Credits** The seniors will learn advanced machine tool operation and planning. The student will focus on an area of the trade into which he/she wishes to enter or remain in general machining, sharpening their skills in the basic and advanced machine tool processes. The student will be shop floor foreman for a period to learn the skills of working with the public and planning work schedules.	**ADVANCED MANUFACTURING RELATED THEORY IV** **Grade 12** **Course #1844 Q.P. 1.00 1.00 Credit** Seniors will learn trigonometry and geometry concepts as they apply to CNC programming and blueprint interpretation and creation. Students will also learn more about the material selection process and mechanics and properties of common materials found in the manufacturing industry. Students will learn advanced CNC programming and CAD techniques. Other relevant topics may be incorporated into the course to meet the career and/or college plans of the students.

AUTO COLLISION & REPAIR TECHNOLOGY

AUTOMOTIVE COLLISION REPAIR & REFINISHING I **Grade 9** **Course #0621 Q.P. 1.00 3.50 Credits** The freshmen will learn various hand skills and knowledge to the degree that will enable the student to work at the level of a painter's helper, in a safe and competent manner. All of the above will be hands on training. Freshmen course of study will include shop safety for the use of hand tools and power tools. Proper jacking and how to use abrasives and sandpaper along with sanding techniques, masking techniques, surface preparation, painting materials, compounding, priming, and the use of synthetic fillers.	**AUTOMOTIVE COLLISION REPAIR & REFINISHING RELATED THEORY I** **Grade 9** **Course #1621 Q.P. 1.00 1.00 Credit** The freshmen will learn how to use the various hand skills and knowledge to the degree that will enable the student to work at the level of a painter's helper in a safe manner, learning how to protect the student from the dangers in the trade areas. Students will be able to read about various hand tools and materials from various books in the related room. Audio visual aids and trade magazines and lectures from the instructor will also be used. Freshmen will be able to learn about various hand tools and materials to be able to complete the above objectives such as safety precautions for the following usage of hammers, dollies, wrenches, ratchets, and sockets, as well as screwdrivers, pliers, cutting shears, and vise grips.
AUTOMOTIVE COLLISION REPAIR & REFINISHING II **Grade 10** **Course #0622 Q.P. 1.00 3.50 Credits** The sophomores will learn, with hands on training, how to acquire knowledge of the various skills which enable them to become a body person’s helper or further his skills as a painter's helper and to follow proper safety procedures. They will also learn to recognize and repair minor collision damage and participate in spot repair and overall refinishing. All the above will be hands on training. The sophomore course of study shall include shop safety with hand tools and automotive metals. We will also be analyzing damaged areas, and roughing procedures. They will be learning several different trade terms of the shop area and the importance of good shop habits and workmanship.	**AUTOMOTIVE COLLISION REPAIR & REFINISHING RELATED THEORY II** **Grade 10** **Course #1622 Q.P. 1.00 1.00 Credit** The sophomores will acquire knowledge of the various skills that enable them to become a body person’s helper or further his or her skills as a painter's helper. Students will learn to recognize and repair minor collision damage and the art of painting and refinishing in a safe manner. The student will learn the dangers of paint and the use of protection techniques. Students will be able to read about various hand tools and materials from various books in the related room. Audio visual aids and trade magazines will be used, as well as, lectures from the instructor. Sophomores will be able to learn about various paint and thinners, and the dangers of each of the following: lacquers, enamels, enamel reducers, lacquer thinners, putty, sealers, and additives.

AUTOMOTIVE COLLISION REPAIR & REFINISHING III **Grade 11** **Course #0623 Q.P. 1.00 4.50 Credits** The junior students will learn panel replacement necessary for a large collision repair. They also will acquire the necessary knowledge and skills needed for applying the various materials used by the automotive manufacturers in a safe manner. All the above will be hands on training. The junior course of study will include the following: The analysis of damage and complete panel replacement. Also, geometry and fillers, torch soldering, and shrinking procedures will be learned, along with the ability to color-match the application of finishes, and general facts about custom refinishing.	**AUTOMOTIVE COLLISION REPAIR & REFINISHING RELATED THEORY III** **Grade 11** **Course #1623 Q.P. 1.00 1.00 Credit** The juniors will acquire the knowledge to analyze the various collision repair methods to become an auto body repairperson with minimal supervision. Students will be given the opportunity to learn panel replacement necessary for a large collision repair. They also will acquire the necessary knowledge and skills needed for applying the various materials used by the automotive manufacturers. Students will be able to read about various collision repairs form various books in the related room. Audio visual aids and trade magazines will also be used, as well as, lectures form the instructor. The juniors' course of study will consist of analyzing damage, panel replacement, jacks, multiple jacks, and major glass replacement.
AUTOMOTIVE COLLISION REPAIR & REFINISHING IV **Grade 12** **Course #0624 Q.P. 1.00 4.50 Credits** The seniors will learn how to perform the various operations required in repairing and refinishing necessary to meet commercial standards safely. All training will be hands-on. The senior course of study will include the following: Collision Estimating, Unibody, and Full Frame Repair using the "Chief EZ liner Classic 25" frame machine along with the Chief Universal Measuring System.	**AUTOMOTIVE COLLISION REPAIR & REFINISHING RELATED THEORY IV** **Grade 12** **Course #0624 Q.P. 1.00 1.00 Credit** The seniors should be competent enough to perform the various operations required in repairing and refinishing necessary to meet commercial standards. Students should be acclimated with the procedures necessary for estimate writing, ordering parts and materials, scheduling of work and customer report. Students will be able to read about various repairing and refinishing from various books in the related room. Audio visual aids and trade magazines will also be used, as well as lectures from the instructor. The senior course of study is as follows: collision estimating, Chief EZ Liner Classic 25 use, and frame straightening.

AUTOMOTIVE TECHNOLOGY

AUTOMOTIVE TECHNOLOGY I **Grade 9** **Course #0641 Q.P. 1.00 3.50 Credits** The freshmen will be instructed on the safety of the shop, and whereabouts of the fire extinguishers, the use of fire extinguishers, the fire blankets, and the emergency shut off switches. The students will also be instructed on the proper use and care of all tools and equipment, the use of power tools, the use of jacks, jacking a vehicle and the placement of a vehicle on a lift. He/she will also learn the basic parts of an automobile, and identify major automotive manufacturers on both domestic and imported vehicles. The first year student will also receive general knowledge of servicing a vehicle (checking fluids, changing oil & filter, and lubrication of all parts needed) and visual inspection of all under hood parts. They will also learn to work on the basic automotive systems such as exhaust, shocks, wheel bearings, brakes, and other minor repairs.	**AUTOMOTIVE TECHNOLOGY RELATED THEORY I** **Grade 9** **Course #1641 Q.P. 1.00 1.00 Credit** The freshmen will learn the procedures of shop and personal safety. The students will learn how to use basic hand tools. The students will learn how to change tires, balance tires, and general lubrication procedures such as servicing vehicles. The students will learn how to care for batteries, service exhaust systems, and repair front-end suspension systems, such as the repairing of wheel bearings and shock absorbers. The students will learn how to service different types of brake systems.
AUTOMOTIVE TECHNOLOGY II **Grade 10** **Course #0642 Q.P. 1.00 3.50 Credits** The sophomores will review all safety factors of the shop. Depending on the learning ability of the student, he/she will be performing more difficult tasks such as complete brake jobs, including the use of the brake-lathe, the overhaul of the brake components, the hands on use of test equipment, and the repair of drive-line components. Sophomores will also learn the basics of front-end alignment.	**AUTOMOTIVE TECHNOLOGY RELATED THEORY II** **Grade 10** **Course #1642 Q.P. 1.00 1.00 Credit** This takes the students beyond basics starting with the more complicated functions. The students will learn how to diagnose and repair starters, charge systems, use testing equipment, such as battery testers, and repair standard transmissions, clutches, drivelines, cooling systems, and engine lubrication systems. The student will learn how to align front ends using a front-end alignment machine.
AUTOMOTIVE TECHNOLOGY III **Grade 11** **Course #0643 Q.P. 1.00 4.50 Credits** The third year automotive students will be instructed and through live hands on work, learn to diagnose and repair major components of the domestic and the	**AUTOMOTIVE TECHNOLOGY RELATED THEORY III** **Grade 11** **Course #1643 Q.P. 1.00 1.00 Credit** This course is more advanced in the automotive area. The students will learn how

imported cars. The student will first be instructed in the proper procedure of diagnosing a problem. Then, students will learn the exact procedure for removal of the component, the disassembly of the unit, the inspection of the unit, the complete repair, and the re-installation of the component. All the above procedures will be performed on engines, transmissions, differentials, and the driveline components.	to service air conditioners, drive lines, fuels systems, carburetors, fuel injections, exhaust emissions controls, engine diagnostics, and engine rebuilding. Students will learn how to use test equipment to check engine blocks, crankshafts, and valve trains.
AUTOMOTIVE TECHNOLOGY IV **Grade 12** **Course #0644 Q.P. 1.00 4.50 Credits** The seniors will be reviewing all automotive shop procedures, and they will have significant involvement in the computer controls of the modern automobile. They will be instructed in the use of special test equipment, reading codes stored in each computer, and the proper way to repair them.	**AUTOMOTIVE TECHNOLOGY RELATED THEORY IV** **Grade 12** **Course #1644 Q.P. 1.00 1.00 Credit** The senior year will be devoted to teaching the students about electrical systems, engine tune-ups, alternators, voltage regulators starting circuits, wiring circuits and computer control systems. The student will learn how to diagnose, and troubleshoot engine problems and how to repair them. The student will learn how the sensors operate and what role they play. The senior automotive student will review work ethics, customer relations, attendance, and how to succeed in the automotive technical industry.

BUSINESS, ENTREPRENEURSHIP, ACCOUNTING, AND MARKETING

BEAM I **Grade 9** **Course #0631 Q.P. 1.00 3.50 Credits**	**BEAM I RELATED** **Grade 9** **Course #1631 Q.P. 1.00 1.00 Credit**
Students will begin with industry health and safety training. Students will learn keyboarding techniques. They will understand Windows operating system basics and learn entry-level functionality of the Microsoft Suite, which they will use to solve common workplace issues. Students will begin with introductory presentation skills, document creation, desktop publishing and spreadsheet management.Students will learn the basics of gathering information and utilizing the Internet as a research tool. Students will be exposed to discussion and employer expectations. Ethics, values, and morals will be engrained into the curriculum. At the end of the year, students will have the opportunity to obtain Microsoft PowerPoint certification. Students will gain an understanding of entrepreneurial characteristics. The student will identify opportunities in marketing, finance, and entrepreneurship. They will learn a basic understanding of the operating procedures of the Minuteman Shoppe and will learn the fundamentals of operating the machines and equipment in the shop. They will develop product/service knowledge and be able to assess customer needs. Students will be able to explain the fundamental principles of monetary and economic exchanges with customers. Freshmen students will also begin to develop an understanding of the role of promotion in business and marketing. Students will begin to learn effective communication skills and apply them in all domains.	Students will be introduced to the fundamentals of professional communication, preparing them to be college and career ready. Students will develop the skills needed to communicate effectively in workplace and real-world settings using multimodal strategies, including written, verbal, and visual communication. Emphasis is placed on creating professional documents, delivering presentations, and collaborating in team environments. Instruction covers the communication process, types of communication and language, and the importance of active listening. Students will build strong reading comprehension and writing skills through practice with writing mechanics, grammar, informal writing, and formal business writing. Public speaking is developed through both informal and formal presentations. Students will also explore professional opportunities, workplace expectations, teamwork, and career readiness skills. Students will learn how to prepare for interviews and present themselves professionally in a variety of business contexts.
BEAM II **Grade 10** **Course #0632 Q.P. 1.00 3.50 Credits**	**BEAM II RELATED** **Grade 10** **Course #1632 Q.P. 1.00 1.00 Credit**
Students will begin with industry health and safety training. Students will become acquainted with the	Sophomore students will be introduced to the dynamic world of social media marketing and

skills, abilities, and attitudes needed for successful job performance in the business industry. Students will be taught the basics of the accounting process, such as accounting terminology and the accounting equation. Students will also learn how to create a chart of accounts, record general journal and general ledger entries, develop "T" accounts, and bring it all together in an accounting worksheet for a sole proprietorship of a service business. Students will learn details of filing rules according to industry filing standards (ARMA). Sophomores will expand their knowledge of spreadsheets, database and presentation software, while building their speed on the keyboard. Leadership and employability skills will continue to be enhanced, as well as the ability to think critically. Students will complete the General Industry 10-hour OSHA certification. Ethics, values, and morals will be engrained into the curriculum. At the end of the year, the students would have the opportunity to obtain Microsoft Word certification. Students will continue to work in the school store and further develop customer service and sales skills. Sophomore students will take a deep dive into social media marketing and create promotional materials for various social media sites. Students will learn the difference between paid and unpaid forms of advertising and how to use those in product-mix strategies to meet profit goals. Project/Service Management will be discussed and students will learn the fundamental knowledge and how to improve workflow and minimize costs. Sophomore students will also learn the basic knowledge in pricing products/services. Students will learn about goal setting and personal branding. Students will also spend time learning about Seasonal Marketing and how business adapts branding/marketing strategies during different seasons/holidays. Students will also touch upon Search Engine Optimization, Blog Marketing, and Affiliate Marketing.	build foundational skills needed for careers in digital marketing. Students will explore key social media concepts while learning how businesses use platforms and digital tools to promote products, engage audiences, and drive brand awareness. Through hands-on, project-based learning, students utilize industry-appropriate technology to simulate real marketing activities. Instruction focuses on content creation, content marketing strategies, and the use of digital marketing tools. Students will examine how marketing research informs business decisions and learn to develop targeted social media strategies. Emphasis will be placed on social media management, including creating their own personal brand. Students will also explore emerging trends in digital marketing and begin planning for future education and career opportunities in the marketing field. By acting as social media marketers, students gain practical experience in decision-making, creativity, collaboration, and professional communication.
BEAM III **Grade 11** **Course #0633 Q.P. 1.00 4.50 Credits**	**BEAM III RELATED** **Grade 11** **Course #1633 Q.P. 1.00 1.00 Credit**

Students will begin with industry health and safety training. Students will continue to develop employability skills including workplace attitudes, effective communication, reliability and time management. Students expand customer service skills and an understanding of the importance of good customer service to a business. Students will improve their leadership and management skills. Students will also continue their accounting work relating to a sole proprietorship of a service by learning how to develop an income statement, balance sheet and statement of cash flow. Students will also learn to analyze those financial statements and understand how to read them accurately. Once completed, students will then move to accounting for a merchandising business of a corporation. Ethics, values, and morals will be engrained into the curriculum. At the end of the year, the students would have the opportunity to obtain Microsoft Excel certification. Students learn how to identify business in society. Students learn how to explain the concepts, systems and tools needed to gather, access, synthesize, evaluate and disseminate information in making business decisions. Students learn how to identify and analyze markets and how to use the available internal and external data to optimize sales. This allows students to implement purchasing procedures to obtain business supplies, equipment, and services. Students also develop policies and procedures to protect workplace security. Junior students learn how to identify and utilize various electronic media for promotional marketing, information and training, and general communications. Students spend time developing and presenting marketing campaigns for various brands. Students learn about the Stock Market and how to purchase and trade stocks. They will also touch upon Sports Marketing and Global Marketing. Advertising is a focus for the students along with Seasonal Advertising and Demand. Students learn about Personal Finance throughout their Junior year covering topics such as Budgeting, Career Readiness, and Investing.	Junior students will be introduced to the business of banking and the financial services industry. Students will develop an understanding of how banks operate and the critical role they play within the economy and society. Instruction explores banking operations, customer service, and the structure of financial institutions while emphasizing real-world applications and industry practices. Students study topics include banking basics, money, savings, lending, and payment systems, as well as the trading of stocks, bonds and employing investing strategies. The course also examines the role and function of the Federal Reserve System, bank regulations, and how financial institutions maintain stability and compliance. Through applied learning activities, students gain insight into day-to-day banking operations, bank performance, and strategies used in selling financial products and services. Additional areas of focus include ethics, security, fraud prevention, and helping students understand the responsibilities and risks within the banking profession. Students will also explore the evolution of banking, major financial crises of the early 21st century, and emerging trends shaping the bank of the future.
BEAM IV **Grade 12** **Course #0634 Q.P. 1.00 4.50 Credits**	**BEAM IV RELATED** **Grade 11** **Course #1634 Q.P. 1.00 1.00 Credit**

Students will demonstrate proficiency in the use of the Microsoft Office suite. Financial literacy and entrepreneurship skills will be strengthened through several individual and group projects. Concepts of business law will also be covered. Students will be equipped with the skills to discover how to become proficient and independent as they transition into becoming young adults and living on their own. Ethics, values, and morals will be engrained into the curriculum. Students will understand the importance of professionalism, including reliability, honesty, responsibility, and accountability. Students will fill out job applications, practice role-playing for job interviewing and complete personal portfolios. At the end of the year, the students would have the opportunity to obtain Microsoft Access certification. Students learn how to manage financial resources to ensure solvency. Students learn how to explain the accounting equation and changes that affect it. Students learn how to journalize transactions, post to a general ledger and prepare financial statements. Senior students expand on Entrepreneurship skills while considering the wants and needs of consumers. Students will learn how to create an effective website for a business. Students expand on their knowledge of stocks and trading. Senior students will also learn about Risk Management and Market Segmentation. Students will gain an understanding of Guerilla Marketing and use their skills to create various Guerilla Marketing campaigns.	Senior students will be given the knowledge and skill needed to realistically evaluate their potential as business owners and entrepreneurs. Students will examine the major steps involved in starting and managing a new business, including ownership structures, strategic planning, finance, and marketing. Through project-based instruction, students apply entrepreneurial concepts while developing a comprehensive business plan. Instruction will begin with exploring the characteristics of successful entrepreneurs and the role of entrepreneurship within a market economy. Students will identify and evaluate market opportunities, learn how to meet customer needs, and design effective marketing strategies. Additional focus is placed on distribution, promotion, and selling techniques essential for business growth. Students will also study key operational components such as selecting a type of ownership, business location and setup, financial planning and tracking, and operations management. Human resource management and risk management are addressed to help students understand staffing, leadership, and business continuity. The course culminates with forward-looking management strategies, preparing students to sustain and grow a business in an evolving marketplace. By the end of the course, students will have developed a detailed personal business plan and have gained practical insight into launching an entrepreneurial venture.

BUILDING AND PROPERTY MAINTENANCE

BUILDING AND PROPERTY MAINTENANCE I **Grade 9** **Course #0901 Q.P. 1.00 3.50 Credits** Freshmen will learn how to use basic measuring instruments and hand tools as well as safe operation of shop power equipment including tag-out lock-out. Students will learn how to work from simple shop drawings to accomplish tasks. Students will be introduced to the variety of materials used in the various building construction trades including wood, copper, and metal. Grounds care and sports field maintenance will be introduced, as well.	**BUILDING AND PROPERTY MAINTENANCE RELATED THEORY I** **Grade 9** **Course #1901 Q.P. 1.00 1.00 Credit** First-year students will receive instruction in safety theory, including the proper use of hand tools, power tools, and precision measuring instruments. The course will place a strong emphasis on reinforcing foundational mathematical skills. Students will develop the ability to measure accurately to the nearest 1/16 of an inch and will be introduced to Occupational Safety and Health Administration (OSHA) regulations relevant to the construction trades.
BUILDING AND PROPERTY MAINTENANCE II **Grade 10** **Course #0902 Q.P. 1.00 3.50 Credits** Sophomore year will emphasize outdoor grounds maintenance with power equipment. The students will be introduced to framing construction and alterations, drywall installation and finishing. Further building maintenance introductions will include plumbing, flooring, and fixture installations. Sophomores will also learn routine maintenance and simple small engine repairs on shop equipment.	**BUILDING AND PROPERTY MAINTENANCE RELATED THEORY II** **Grade 10** **Course #1902 Q.P. 1.00 1.00 Credit** Sophomore students will study the theory and principles of Plant and Building Maintenance. The course provides comprehensive coverage of the trades and industries related to the program. Students will utilize laptops or computers to research key terminology and prepare reports on relevant subjects and industry topics. They will apply acquired knowledge to diagnose problems and develop appropriate solutions. Classroom instruction incorporates the use of simulators to enhance hand–eye coordination skills. Upon satisfactory completion of assigned work, students will revisit Occupational Safety and Health Administration (OSHA) regulations as they pertain to construction trade safety. Additional areas of study include blueprint reading, construction materials, fasteners, paints and finishes, and power tool safety.
BUILDING AND PROPERTY MAINTENANCE III **Grade 11** **Course #0903 Q.P. 1.00 4.50 Credits** Juniors will use previously learned skills in outdoor grounds maintenance on live jobs off	**BUILDING AND PROPERTY MAINTENANCE RELATED THEORY III** **Grade 11** **Course #1903 Q.P. 1.00 1.00 Credit** Junior students will receive comprehensive instruction in the safe operation of all equipment.

campus, including work in conjunction with the Facilities Department. Co-Op opportunities will be available in the 2nd half of the year. Circuitry and basic HVAC and low voltage trouble shooting will be introduced. Building and facilities maintenance concepts will be reinforced through live jobs and real troubleshooting opportunities within the shop and school. Further development in the building trades through repetition is encouraged and practiced.	They will develop skills in surface preparation, priming, and painting across a variety of materials. Building on their practical experience and technical knowledge, students will complete increasingly complex projects. In addition, they will have opportunities to participate in cooperative education placements and engage in community-based projects related to Buildings and Property Maintenance.
BUILDING AND PROPERTY MAINTENANCE IV **Grade 12** **Course #0904 Q.P. 1.00 4.50 Credits** Senior students will emphasize leadership capabilities and professionalism while further developing landscape management skills and prepare to take the MA Pesticide Exam. Co-Op opportunities are available immediately and they will further their experience and practice amongst the building trades and preparing for entry into the workforce or post-secondary education. Seniors will be introduced to Facilities Management software systems. Students will apply the knowledge and techniques acquired in shop and related coursework through active participation in the repair, maintenance, and general upkeep of school buildings and grounds.	**BUILDING AND PROPERTY MAINTENANCE RELATED THEORY IV** **Grade 12** **Course #1904 Q.P. 1.00 1.00 Credit** The senior students will learn the theory of developing troubleshooting skills along with landscaping. Mechanical and architectural drawing will be done in depth. Students will learn about energy efficiency and green building technologies. Customer service and recordkeeping will be covered.

CABINETMAKING

CABINETMAKING I **Grade 9** **Course #0661 Q.P. 1.00 3.50 Credits** The freshmen will learn the safe and proper use of both hand and power tools. While working on various projects, the student will learn the fundamentals of good design, and how to identify various materials. The student will also be given instruction in proper methods of measuring, how to sketch, how to make layout rods, how to fabricate templates and jigs, and how to select and install hardware.	**CABINETMAKING RELATED THEORY I** **Grade 9** **Course #1661 Q.P. 1.00 1.00 Credits** The freshmen will receive classroom instruction concerning the proper and safe methods in the operation and use of all hand tools and small power tools including the circular saw, electric drill, saber saw, reciprocating saw, belt sander, and other related power tools. Students will be given classroom instruction in shop safety procedures, hardware, maintenance, and housekeeping. Students will learn related math including estimating, board foot measurement, and the proper understanding and use of the ruler. Students will also be introduced to the basic operation of certain heavier machines including the band saw, table saw, radial arm saw, drill press, thickness planer, and the jointer.
CABINETMAKING II **Grade 10** **Course #0662 Q.P. 1.00 3.50 Credits** The sophomores will learn proper usage, safety, and maintenance of woodworking machines in greater detail. They will learn how to select and sharpen bits, blades, and cutters. Student projects will be more complex as the students progress. Special attention is given so that students complete assignments in a timely manner. Students will learn to design and build projects such as wall shelves, bookcases, storage cabinets, tables, benches, and other household furnishings.	**CABINETMAKING RELATED THEORY II** **Grade 10** **Course #1662 Q.P. 1.00 1.00 Credit** This course exposes the student to more complicated machine techniques and operations needed to develop skills in setting up specific jobs such as cabinet doors, drawers, furniture legs, planning and gluing tasks. Students will start the second year where they left off as freshmen, learning to operate with more skill the band saw, jointer, thickness planer/sander, and the drill press from the technical view, using the facilities of the classroom and available video subject matter. The student will be given proper instruction in cutter and tool sharpening, machine repair and adjustment.
CABINETMAKING III **Grade 11** **Course #0663 Q.P. 1.00 4.50 Credits** The juniors will learn more advanced methods of joinery used in Cabinetmaking. The student will learn the proper layout and building of kitchen cabinets. The student will learn drawer construction using various wood joints and hardware. They will learn how to read blueprints	**CABINETMAKING RELATED THEORY III** **Grade 11** **Course #1663 Q.P. 1.00 1.00 Credit** This course is more advanced, teaching the finer skills necessary to be competent and competitive. Students will develop efficiency using time, materials wisely, develop shortcuts,

and construct cabinets from them. The students will be encouraged to seek out of school experience through the school's Co-op program.	and methods of profitable production, develop drawing skills, learn use and preparation of blue prints, and understand how to read customers' sketches and shop drawings. Qualified students are encouraged to seek out-of-school experience through the school's Co-op program.
CABINETMAKING IV **Grade 12** **Course #0664 Q.P. 1.00 4.50 Credits** The seniors will learn how to apply plastic laminator on countertops and cabinets. Students will learn how to make architectural molding. They will learn how to install cabinets on the job in the field. The students will be exposed to remodeling by doing jobs away from the school environment, which will also expose them to the use of various types of staging including pump jack, roof brackets, etc. The student will also learn the safety in their use, including ladders, etc.	**CABINETMAKING RELATED THEORY IV** **Grade 12** **Course #1664 Q.P. 1.00 1.00 Credit** Students will understand the finer qualities needed to be successful in this field. The student will have the skills necessary to obtain an entry-level position in the cabinet industry. Students will be exposed to other building trade subjects including staging, house framing, dry wall insulation, stair building, interior trim, siding, suspended ceilings, paneling, roofing, and installation of doors and windows. In addition, the students will receive instruction in the proper methods of seeking employment, including job application, proper attitude, and attire.

CARPENTRY

CARPENTRY I **Grade 9** **Course #0671 Q.P. 1.00 3.50 Credits** Grade 9 Carpentry introduces students to the foundational skills and practices of residential construction. Through a combination of classroom instruction, live demonstrations, and supervised shop work, students learn essential shop safety, proper use of hand and power tools, ladder and scaffolding procedures, and the basics of rough framing. Emphasis is placed on developing safe work habits, accuracy, teamwork, and confidence in tool use while building an understanding of how carpentry contributes to the construction of a home. Students apply practical math skills, read basic construction plans, and practice industry-aligned safety procedures following OSHA guidelines. This course serves as the entry point to the Carpentry Career & Technical Education pathway, preparing students for more advanced construction projects in future years.	**CARPENTRY RELATED THEORY I** **Grade 9** **Course #1671 Q.P. 1.00 1.00 Credit** The freshmen will learn safe shop and tool practices. Students will become familiar with the required construction practices necessary for job success. The student will learn the various concepts of wood joining. An emphasis will be placed on the characteristics of wood. The student will learn how to use hand tools safely and properly. The student will be able to use portable and stationary power tools safely and properly.
CARPENTRY II **Grade 10** **Course #0672 Q.P. 1.00 3.50 Credits** Grade 10 Carpentry builds on introductory construction skills and introduces students to more advanced residential carpentry concepts. Students gain hands-on experience using hand and power tools safely while learning structural framing, roof systems, stair construction, and basic print reading. Emphasis is placed on accuracy, craftsmanship, teamwork, and workplace professionalism. Applied math skills are integrated throughout the course, including measurement, layout, material estimation, and basic geometry used in construction. This course prepares students with the foundational skills and knowledge necessary to participate in the construction of a full residential home during their junior year, as well as for advanced carpentry coursework, technical training, apprenticeships, and entry-level employment in the construction industry.	**CARPENTRY RELATED THEORY II** **Grade 10** **Course #1672 Q.P. 1.00 1.00 Credit** The sophomores will be involved in a more advanced study of stationary and portable power tools. Shop and tool safety will be greatly emphasized. An example of the portable power tools are, skill saw, sabre saw, hand drill, belt sander, and router. The stationary power tools that the student will become proficient with are, table saw, jointer, radial saw, band saw, and drill press. Construction technology will be taught in the related room. Related drawing will also be taught, with an emphasis placed on the drawing of a storage shed.

CARPENTRY III **Grade 11** **Course #0673 Q.P. 1.00 4.50 Credits** The juniors will learn basic framing methods used in modern house construction. The students will have the opportunity to lay out floor and ceiling joists, walls, and rafters. They will do most of the finish work involved in a house, such as hanging doors, installing baseboards, and building stairs. The students will learn safe work procedures. This course brings the students into direct contact with the public. The students will develop proficiency in the skills learned in the first two years of shop.	**CARPENTRY RELATED THEORY III** **Grade 11** **Course #1673 Q.P. 1.00 1.00 Credit** The juniors will learn how to draw, estimate, layout, and build a modern day house. The student will learn how to frame a building using the platform method of construction. The concepts taught are sill and floor framing, wall framing and roof framing. The related program will coordinate as much as possible with the house-building program. Construction practices and job safety will be greatly emphasized.
CARPENTRY IV **Grade 12** **Course #0674 Q.P. 1.00 4.50 Credits** The seniors will expand on the knowledge gained from the previous year. They will refine their job skills and have the opportunity to learn different methods of accomplishing the same task. As each house is different, they will learn to solve problems not encountered before. They will learn cooperation with different trades, which is a necessity if one wishes to succeed in this trade. This course is designed to provide the student with the entry-level skills needed to procure employment in the carpentry trade. It is the objective to promote personal pride while striving for excellence in every task undertaken.	**CARPENTRY RELATED THEORY IV** **Grade 12** **Course #1674 Q.P. 1.00 1.00 Credit** The seniors will learn how to do interior and exterior trim. The exterior trim will include a water table, corner boards, windows and doors, casing, rake, and siding. Interior trim will include kitchen cabinets, door and window trim, hardwood floors, baseboard and closet trim. This related instruction will coordinate with the house-building program. The seniors will review all modern day concepts involved in platform construction. House design and floor plan layout will also be taught.

COSMETOLOGY

COSMETOLOGY I **Grade 9** **Course #0831 Q.P. 1.00 3.50 Credits** The Introduction to Cosmetology for Grade 9 provides students with a comprehensive foundation in the world of beauty and personal care. Covering health and safety regulations, decontamination, and infection control, the course emphasizes practical skills such as shampooing techniques, wet hairstyling, blow-dry styling, thermal styling, and designing for different hair textures. Students also learn braiding techniques, sectioning, scalp treatments, basic manicuring, and customer service communication. The course aims to instill essential employability skills required for success in the dynamic cosmetology industry.	**COSMETOLOGY RELATED THEORY I** **Grade 9** **Course #1831 Q.P. 1.00 1.00 Credit** The identification of school rules and regulations, resources, state regulations, and licensing requirements. Theory on Job Opportunities, Life Skills, Professional Image, Hairstyling, Nail Structure and Growth along with OSHA Certification will be covered.
COSMETOLOGY II **Grade 10** **Course #0832 Q.P. 1.00 3.50 Credits** The sophomore Cosmetology curriculum provides students with a sophisticated skill set in beauty and personal care. Throughout the program, students define and implement health and safety regulations, demonstrate continued development in decontamination and infection control, and an introduction of haircutting techniques as well as facial and makeup. The course also covers continued development in wet hairstyling, shampooing, blow-dry styling, thermal styling, and perm rod winding. Additional advanced techniques will be integrated throughout the course. Students gain proficiency in nail care, including manicures and pedicures, and develop essential customer service and employability skills. Participation in trade-specific shows, community service projects and classes keep students updated on industry trends, preparing them for a successful career in advanced cosmetology.	**COSMETOLOGY RELATED THEORY II** **Grade 10** **Course #1832 Q.P. 1.00 1.00 Credit** Students will learn during their related time, Infection Control, Manicures and Pedicures, Facials and Facial Make-up, Scalp Care, Hair Cutting and Hair Removal also, the theory structure of the hair, skin, and nails along with Career Essentials Certificate.

COSMETOLOGY III **Grade 11** **Course #0833 Q.P. 1.00 4.50 Credits**The juniors will learn how to perform hands on skills, such as hair coloring, chemical texture services, artificial nail enhancements, hair extensions and wig care, waxing, band lash application, haircutting, clipper cutting and hair styling and customer service skills. The students will learn and develop basic practices required by the State Board of Cosmetology while continuously working on the proficiency of the skills they previously learned during freshmen and sophomore years.	**COSMETOLOGY RELATED THEORY III** **Grade 11** **Course #1833 Q.P. 1.00 1.00 Credit** The juniors will learn to develop a positive and cultivating approach in health, poise, and professional ethics. They are provided with knowledge of cosmetology theory that is needed to be successful in the trade and help the students create their own sense of style. Theory in Chemical Services and Nail Enhancements will be covered, along with Nail and Skin Disorders/Diseases.
COSMETOLOGY IV **Grade 12** **Course #0834 Q.P. 1.00 4.50 Credits** The seniors will continue with the chemical application of products using various advanced hair coloring techniques to perform several hair color services using multiple methods of application. The students will also learn chemical relaxing methods and techniques, thermal and chemical hair straightening, and the safety precautions that must be used with each salon service. Students will learn basic salon management, how to maintain accurate business records, and the fundamental rules of first aid. Students will enhance their ability in all phases of the cosmetology course such as facials, nail care, artificial nail enhancements, scalp treatments, hair cutting, hair coloring, texture services, and make-up application. This will prepare the student for gainful employment resulting in the students being prepared for the State Board Exam after the accumulation of the 1,000-hour program.	**COSMETOLOGY RELATED THEORY IV** **Grade 12** **Course #1834 Q.P. 1.00 1.00 Credit** The seniors will cover Sciences concerning General Anatomy, Electricity and Chemistry of tools/products used and will develop a basic knowledge and understanding that will set the foundation for the student to advance into industry. Business aspects of trade will be covered, along with Senior Projects based on business and employability skills. Students will view the Studio Luma series on salon atmosphere, techniques, and professionalism.

CULINARY ARTS

CULINARY ARTS I **Grade 9** **Course #0681 Q.P. 1.00 3.50 Credit** The freshmen will learn the basics of the kitchen. This includes running a dish machine, pot washing, sanitation, dining room procedures, basic sandwiches, and salads. Also covered is the use of basic equipment; slicer, portion scales, bakers scales, mixers, and mangler. The student will spend time in the dining room learning to serve customers and set up the dining room for service. Basic baking items include cookies, dinner rolls, and other less advanced items. Freshmen are usually paired with upperclassmen who will help them. Particular emphasis is placed on safety.	**CULINARY ARTS RELATED THEORY I** **Grade 9** **Course #1681 Q.P. 1.00 1.00 Credit** The freshmen will learn how to develop the basics of the kitchen. This includes safety, sanitation, and hygiene. In addition, dining room procedures such as computer checks, table setting, and serving customers will be taught. Students will be introduced to food service hygiene, correct temperature regulation, and kitchen sanitation. Also, correct safety habits will be taught in the related classroom. Students will be tested on all basic skills pertaining to the food industry. This course will include lectures, video, guest speakers, and demonstrations. Activity guides from the food management, production and service curriculum will be used.
CULINARY ARTS II **Grade 10** **Course #0682 Q.P. 1.00 3.50 Credits** The students will continue with their kitchen basics as in the first year. Students will learn more complicated recipes and formulas and will often be expected to work on some projects alone. They will also be introduced to grill, fryolator, and line work. Particular emphasis is placed on safety.	**CULINARY ARTS RELATED THEORY II** **Grade 10** **Course #1682 Q.P. 1.00 1.00 Credit** Sophomores will continue with their kitchen basics as in the first year. Students will learn more complicated recipes and formulas. Emphasis will be placed on weights and measures. Students will work on different projects alone. Particular emphasis is placed on safety and sanitation. Students will take and pass OSHA.
CULINARY ARTS III **Grade 11** **Course #0683 Q.P. 1.00 4.50 Credits** The juniors will work in meats, sauces, soup, more advanced bakery work, buffet work, and handle the more difficult items on the menu. Particular attention is paid to line work. Emphasis is placed on safety.	**CULINARY ARTS RELATED THEORY III** **Grade 11** **Course #1683 Q.P. 1.00 1.00 Credit** The juniors will be introduced to more advanced entrees, soups, sauces, gravy, and vegetable preparation. Particular attention is paid to line work, as well as buffet work and more advanced bakery work. Particular attention is placed on safety and hygiene. Students will become certified in Serv-Safe.

CULINARY ARTS IV Grade 12 Course #0684 Q.P. 1.00 4.50 Credits	CULINARY ARTS RELATED THEORY IV Grade 12 Course #1684 Q.P. 1.00 1.00 Credit
Seniors will continue their work on main entrees, soups, and sauces. Students will help underclassmen with their work. The students will do dining room supervision and hosting, and more advanced pastry work, such as different types of breads and rolls. Line and grill work, butchering, inventory, storeroom, and set up and control are also emphasized. Particular emphasis is placed on safety.	The seniors continue their work on main entrees, soups, sauces, Oriental, Chinese, and French Cuisine. Each student in the senior class is required to do a project such as design a menu. Students will be introduced to marzipan, gum paste, and ice cream.

DIESEL TECHNOLOGY

DIESEL TECHNOLOGY **Grade 9** **Course #0991 Q.P 1.00 3.5 Credits** Freshman students will learn the essential skills required to work as diesel technicians, focusing on the maintenance and repair of various diesel engine components. These include brake systems, steering systems, suspension systems, and electrical systems. The curriculum covers a range of critical skills, such as basic safety procedures and practices, the use of hand/power tools and shop equipment for precision measuring, and the handling of mechanical fasteners and fastener torque. Students also gain knowledge in working with tires and wheels (light duty), hydraulic brake systems, air brake systems, suspension, drivetrain, and power steering systems. Additionally, the program includes heavy-duty truck tire service and alignment, as well as basic service and repair techniques.	**DIESEL TECHNOLOGY RELATED THEORY I** **Grade 9** **Course #1991 Q.P. 1.00 1.00 Credit** Freshman students will learn about personal safety, shop safety, and hazardous materials. They will be taught the proper and safe use of hand and power tools, as well as common shop rules and the safe operation of shop equipment. Instruction will include hands-on activities and interactive lessons, with textbooks, videos, and presentations covering fasteners, tires, brake systems, suspension, and drivetrain systems. Students will also use hands-on training aids to become familiar with these various systems.
DIESEL TECHNOLOGY **Grade 10** **Course #0992 Q.P 1.00 3.5 Credits** Sophomore students will learn about diesel engine design and operation, diagnostic techniques, repair strategies, and the differences between gasoline and diesel engines. They will gain hands-on experience in disassembling and reassembling diesel engines, performing basic repairs and maintenance, understanding basic electricity, and troubleshooting using multimeters and wiring schematics. Key topics covered include advanced safety procedures and practices, the design and operation of diesel engines, an introduction to diagnostic tools and techniques, basic repair strategies for diesel engines, and the disassembly and reassembly of diesel engines.	**DIESEL TECHNOLOGY RELATED THEORY II** **Grade 10** **Course #1991 Q.P. 1.00 1.00 Credit** Sophomore students will review shop safety. They will learn about the four-stroke cycle engine, the differences between gasoline and diesel engines, and their major systems (oil, fuel, and cooling). Students will also study OSHA regulations and their relevance to the diesel industry. The curriculum includes precision measuring of internal engine parts, as well as disassembling, inspecting, and reassembling engines following industry-recommended procedures and specifications. Additionally, students will be introduced to basic electrical theory and the use of electrical test equipment for battery, starting, and charging systems. They will also learn the fundamentals of preventive maintenance used in the diesel industry.

DIESEL TECHNOLOGY **Grade 11** **Course #0993 Q.P 1.00 3.5 Credits** Junior students will gain the skills needed to perform routine maintenance, preventing breakdowns and extending the lifespan of diesel engines and equipment. Through practical exercises and projects, they will develop their abilities in maintenance, problem diagnosis, and repairs on diesel engines and related equipment. Additionally, they will learn to identify and troubleshoot mechanical and electrical issues on both light and heavy-duty vehicle systems, fostering critical thinking and analytical skills. The course covers the servicing and repair of medium and heavy-duty transmissions, providing valuable expertise for working on large vehicles. Students will also study heavy-duty air conditioning systems, preparing for MACS 609 Certification. Hands-on experience with compact construction machinery further broadens their expertise beyond standard vehicles. Key topics include routine maintenance procedures for diesel engines, identifying and repairing mechanical and electrical failures, servicing and repairing transmissions, air conditioning service and certification preparation, performing D.O.T. inspections and adhering to regulations, live maintenance service on compact construction equipment, and developing basic welding skills essential for diesel technology.	**DIESEL TECHNOLOGY RELATED THEORY III** **Grade 11** **Course #1993 Q.P. 1.00 1.00 Credit** Junior students will engage in a review of shop safety, including how to read and use Material Safety Data Sheets (MSDS). They will learn advanced electrical concepts, the use of multimeters, and basic wiring schematics. Students will also gain an understanding of the Department of Transportation (D.O.T.) regulations as they relate to diesel technicians. Additionally, they will study transmissions, steering, suspension, and frame construction. The course includes instruction on how to write repair orders and order parts from suppliers.
DIESEL TECHNOLOGY **Grade 12** **Course #0994 Q.P 1.00 3.5 Credits** Senior students will master advanced safety procedures and regulations in diesel technology. They will service and diagnose HVAC and climate control systems on live vehicles, demonstrating the skills required for diagnosing and repairing diesel emissions, fuel systems, and OBD2 systems. Additionally, students will explore alternative-fueled vehicles and the latest technologies in the industry. Key areas of focus	**DIESEL TECHNOLOGY RELATED THEORY IV** **Grade 12** **Course #1994 Q.P. 1.00 1.00 Credit** Senior students will complete a thorough review of shop safety, OSHA safety regulations, and lift safety procedures. They will learn about heating and air conditioning systems in light and heavy-duty vehicles. Students will study advanced emission systems found on modern diesel engines. They will also explore GPS, lane guidance systems, and collision avoidance technologies. Additionally, students will learn about alternative fuels for the heavy-duty truck market.

include reviewing shop safety, MSDS, and lift safety, servicing and diagnosing HVAC/climate control systems, advanced diesel emission diagnostics, advanced diesel engine diagnostics, and the basics of alternative fuel vehicles. Students will also study GPS/ lane guidance and collision avoidance systems. Moreover, they will perform preventive maintenance (P.M.) services and inspections on live vehicles and compact construction equipment.	

DENTAL ASSISTING

DENTAL ASSISTING I **Grade 9** **Course # 0731 Q.P 1.00 3.5 Credits** Initiation into the dental profession starts with dental anatomy, identifying structures of the oral cavity, head and neck anatomy, medical/dental terminology, and taking vital signs. Initial exposure occurs in the areas of infection control/OSHA health and safety regulations, dental materials, laboratory assignments and dental office management. Students will also learn how to emit professionalism through personal hygiene habits, interpersonal communication, and appearance.	**DENTAL ASSISTING RELATED THEORY I** **Grade 9** **Course # 1731 Q.P 1.00 1.0 Credit** This year starts with exploring the history, background, and what constitutes the dental healthcare team including the individual role of the dental assistant. Students become familiar with the overall anatomy and physiology of the body with special emphasis on the head and neck. Introduction to infection control and cross contamination based on OSHA regulations provides a basis for certification in the second year. Students begin to learn the language of medical/dental terminology, building to proficiency as they move forward in the program.
DENTAL ASSISTING II **Grade 10** **Course # 0762 Q.P 1.00 3.5 Credits** Students will gain the skills and knowledge of proper infection control and the microbiology that initiates it. Introduction to patient care including, dental charting, basic chairside assisting, instrument identification and transfer along with anesthesia and sedation. Also included are proper sterilization techniques, processing contaminated instruments, and identification/handling of hazardous materials. Also accomplished at this grade level is the certification of OSHA 10- hour card/healthcare industry and CPR/BLS for the healthcare provider.	**DENTAL ASSISTING RELATED THEORY II** **Grade 10** **Course # 1732 Q.P 1.00 1.0 Credit** This year focuses on disease transmission and infection prevention. Students will learn the differences between disinfection and sterilization and the agencies that regulate these procedures. Also covered is applied pharmacology as it pertains to the dental assistant, identifying the role of dental drugs, anesthesia and sedation in dentistry. In depth coverage of the chemical nature of materials used for impressions, dental models, and restorations to supplement procedures carried out in shop.
DENTAL ASSISTING III **Grade 11** **Course #0733 Q.P 1.00 4.5 Credits** Building on the foundational classes studied in prior years the student will elaborate with dental materials and laboratory projects. Focus will be on radiation health and safety, proper placement	**DENTAL ASSISTING RELATED THEORY III** **Grade 11** **Course #1733 Q.P 1.00 1.0 Credit** Primary attention is paid to chair side dental assisting and the dental materials used. Examples are, gypsum, alginate, composite,

and exposure of dental radiographs using DXTTR® mannequins, processing and mounting film- based x-rays as well as exposing digital records. Students will also attain proficiency in the use of the panoramic digital x-ray system, gaining competency in identification of structural landmarks. The dental assisting student will gain hands-on chair side experience, through externships as well as interpersonal communication within the office. Professionalism, written and oral communication, as well as peer and affiliate relationship building are emphasized.	cements, liners, bases, etchant and bonding systems. Balancing with the principles of radiation health and safety, becoming familiar with the x-ray units and the role of kilovolt-peak (kVp) and milliamp-seconds (mAs) for the best and safest exposure procedures. An understanding of the chemistry of developing and fixing solutions for manual film processing, how to troubleshoot errors and maintain proper infection control.
DENTAL ASSISTING IV **Grade 12** **Course #1733 Q.P 1.00 4.5 Credits** During the final year of dental assisting students will continue to gain experience through externships and co-op. Completion of radiology competencies will be a focus for graduation and employability along with technical and literary aspects of dental office and business management. During this year, concentration is also placed on dental specialties (endodontics, oral surgery, orthodontics, periodontics, prosthodontics) and their affiliations. Becoming a quality clinician in the dental profession requires the understanding and implementation of ethics and jurisprudence this sets the stage for students to emerge as confident caring clinicians providing a role model for others.	**DENTAL ASSISTING RELATED THEORY IV** **Grade 12** **Course #1734 Q.P 1.00 1.0 Credit** Soon-to-be graduates concentrate on the ethical standards and jurisprudence of the dental assistant, instilling the values and morals of a quality healthcare provider. Exposure to business management and entrepreneurial skills sets the way for many future options post-graduation.

DRAFTING

DRAFTING I **Grade 9** **Course #0741 Q.P. 1.00 3.50 credits** This course provides the student with the basics of drafting. Students receive instruction in career opportunities, personal and shop safety, computer aided drafting (CAD), geometric construction, orthographic views, dimensioning, and isometric views. Instruction incorporates presentation, demonstration, and hands-on performance testing.	**DRAFTING RELATED THEORY I** **Grade 9** **Course #1741 Q.P. 1.00 1.00 credit** This course provides students with the theory behind the basics of drafting. Students receive instruction in career opportunities, personal and shop safety, computer aided drafting (CAD), geometric construction, orthographic views, dimensioning, and isometrics. Instruction incorporates presentation and testing in the areas of shop safety procedures, use of manual drafting tools and equipment, basics of sketching, presentation, and working drawings. Reading, writing and math assignments related to drafting theory is an integral part of this class.
DRAFTING II **Grade 10** **Course #0742 Q.P. 1.00 3.50 credits** This course provides students with an introduction to the components of mechanical design. This full-year course expands on the basic CAD drawing techniques for mechanical design projects. Students further develop drawings skills using multi-view drawings, orthographic projection techniques, sectional views and auxiliary views as they develop drawings for basic geometric constructions, bolt, screw and nut drawings, welding drawings and structural drafting. Various shop processes are examined including casting, forging, and weldment parts. Instruction incorporates presentation drawings, including shading, perspective, and exploded assembly drawings. Students are introduced to the product design processes that incorporate 3D laser scanning and printing. As part of student co-op/industry preparation, students will attain a 10 hour OSHA certification.	**DRAFTING RELATED THEORY II** **Grade 10** **Course #1742 Q.P. 1.00 1.00 credit** This course provides students with an introduction to the theory relating to components of mechanical design. While developing visualizing and drafting techniques, students will learn the basics of dimensioning, notes, and specifications within drawings, request product literature, and use reference materials. Instruction incorporates demonstration and various calculations including bolt length, thread depth, lead, bend allowance and others. Measuring instruments will be introduced including, scales, micrometers and vernier calipers. Reading, writing, and math assignments related to drafting professions are integrated into curriculum and classroom assignments. As part of student co-op/industry preparation students will learn soft skills through the Skills USA Career Essentials program.

DRAFTING III **Grade 11** **Course #0743 Q.P. 1.00 4.50 credits** This course provides students with an introduction to residential architectural drawing and design. This course incorporates basic site design, structural and mechanical systems design and detailing required in the building permit process. Students are introduced to property surveys and plot plan drawings. Students learn to draw floor plans, elevations, foundation plans, foundation sections, framing plans, cross sections, longitudinal sections and typical wall section drawings, exterior perspectives, rendering, and architectural modeling. Students are also introduced to plumbing plans, HVAC drawings, and electrical drawings.	**DRAFTING RELATED THEORY III** **Grade 11** **Course #1743 Q.P. 1.00 1.00 credit** This course provides students with an introduction to theory relating to residential architectural drawing and design. Students are introduced to map and survey drafting, including azimuth and bearing compass layout, contour grading, and foundation footing design. Students become familiar with light frame construction including floor joist, roof rafter and ceiling joist sizing and layouts. Students also learn the basics for structural steel layouts and building design as well as girder, header and ridge beam design in traditional lumber, laminated lumber, and steel. Additional topics include plumbing supply and drainage systems, electrical power distribution systems, HVAC systems, heat loss calculation, and the Massachusetts energy compliance code. Research including reading, writing, and math assignments related to the drafting profession, are integrated with academic frameworks during this class. Students will also create resumes in preparation for cooperative education opportunities. Instruction incorporates demonstrations and testing using competency-based vocational education (CBVE) for Architectural Drafting.
DRAFTING IV **Grade 12** **Course #0744 Q.P. 1.00 4.50 credits** Students explore materials, advanced dimensioning techniques, tolerancing, checking, 3D solid models, 3D solid rendering, sheet metal design and detailing, robotics competition design and detailing, schematic drawings, wiring diagrams. Instruction incorporates presentations, demonstration, and hands-on performance testing in the areas of advanced CAD software, 3D solids, mechanical design, and electrical / electronic design. Students participate in mechanical design projects. An introduction to computer aided manufacturing is presented as well.	**DRAFTING RELATED THEORY IV** **Grade 12** **Course #1744 Q.P. 1.00 1.00 Credit** This course is designed to provide students with theory relating to mechanical and electrical/ electronic design and to inform them of career opportunities in mechanical design. Students explore alternative design processes, legislation related to architecture and mechanical design, project management skills, and a possible capstone project. Instruction incorporates measuring tools, basic electronic theory, electronic component identification, electronic diagrams, and sheet metal. Reading, writing and math assignments related to the drafting professions are integrated with academic frameworks during this class.

ELECTRICAL

ELECTRICAL I **Grade 9** **Course #0761 Q.P. 1.00 3.50 Credits** freshmen will learn shop safety, the proper use of hand tools, responsibilities, shop procedures, and Right to Know Laws regarding use and storage of chemicals. They will start with low voltage projects and work their way through simple line voltage projects. Students will study the proper use and installation of materials and hardware, with an introduction to power tools.	**ELECTRICAL RELATED THEORY I** **Grade 9** **Course #1761 Q.P. 1.00 1.00 Credit** Freshmen will learn Electron Theory, parallel and series circuits, sources of power, and signal systems. They will also work with math as it relates to the electrical trade including OHM's Law, wire size, line drop, and circuits. Safety rules and accident prevention along with an introduction of the National Electrical Code, wiring methods, blueprint reading, and drawings will be covered.
ELECTRICAL II **Grade 10** **Course #0762 Q.P. 1.00 3.50 Credits** The sophomores will learn Residential Wiring, Data Networking, conduit and tubing bending and residential services. An introduction to appliances, heating, motor controls, motors, and transformers, both the installation and repair of.	**ELECTRICAL RELATED THEORY II** **Grade 10** **Course #1762 Q.P. 1.00 1.00 Credit** The sophomores will learn job-estimating, services, transformers, and test equipment. They will also learn the higher math of the electrical trade along with batteries, electric heating, and load calculations. A more in-depth study of blueprints and the National Electrical Code and safety on and off the job will be covered.
ELECTRICAL III **Grade 11** **Course #0763 Q.P. 1.00 4.50 Credits** The juniors will learn how to use and maintain all safety equipment on both inside and outside projects. They will train in all aspects of the electrical field. Students will be introduced to outside projects in the community and continue to work on jobs in the school itself. They will also train on lab volt trainers to sharpen their motor control and troubleshooting skills. At the beginning of the third quarter, students would be allowed to participate in the Co-op Program.	**ELECTRICAL RELATED THEORY III** **Grade 11** **Course #1763 Q.P. 1.00 1.00 Credit** The juniors will learn about generators and motors, both AC and DC. They will also learn math involving generators and motors. Commercial blueprint reading and N.E.C. code regarding commercial buildings will be covered. Safety is covered in-depth as to the operation, guards, connection, and checking of equipment and circuits. In addition, they will learn about O.S.H.A. and other safety organizations.

ELECTRICAL IV **Grade 12** **Course #0764 Q.P. 1.00 4.50 Credits** The seniors will learn how to properly use all the equipment in the shop. They will work more substantially on the outside projects. They will be given chances to individually advance in many areas of the trade. Students will also learn the knowledge of all factors including cost of tools and materials, time and labor. This will then prepare them for an entry-level job in the trade and eventually a license.	**ELECTRICAL RELATED THEORY IV** **Grade 12** **Course #1764 Q.P. 1.00 1.00 Credit** The seniors will learn about industrial transformers, emergency power, metering, and programmable logic controllers. The math covered this year is inductance, transformer, power factors, and motor calculations. The N.E.C. codes on industrial work are covered. Also covered: Labor laws, wages and the current electrical industry, apprenticeship programs and employment. A complete review of all safety is covered in-depth.

ELECTRONICS

ELECTRONICS I **Grade 9** **Course #0781 Q.P. 1.00 3.50 Credits** Freshmen will learn procedures, practices, and policy relating to safety. Students will also learn basic electronic circuit prototyping through activities like creating printed circuit board layouts and soldering. Students will become familiar with the use of hand and power tools. Students will also become familiar with basic electronic measurement of voltage, current and resistance using instrumentation such as the multimeter, oscilloscope, and function generator. Students will also perform experiments related to DC and AC circuit schematic capture, layout, simulation, and analysis using software tools such as MultiSIM.	**ELECTRONICS RELATED THEORY I** **Grade 9** **Course #1781 Q.P. 1.00 1.00 Credit** The freshmen will learn about different types of electronic technology such as microelectronics, analog and digital through discussion. They will learn about career specializations for technicians, technologists, and engineers. Students will learn about the physical and electrical characteristics of passive components such as resistors, capacitors, and inductors. They will also learn about the theoretical aspects of DC and AC circuits and methods of steady state and transient analysis. Students will learn basic circuit behavior using Ohm's Law, Kirchhoff's Law, and the Norton and Thevenin equivalents.
ELECTRONICS II **Grade 10** **Course #0782 Q.P. 1.00 4.50 Credits** The sophomores will become familiar with the physical and electrical properties of passive and semiconductor components, and how to test and evaluate them. They will use various breadboard techniques to construct, troubleshoot, and analyze Analog Circuits such as power supplies, amplifiers, RC and LC oscillators, filters, and optical light sources and detectors. Students will learn how to use test equipment associated with these circuits, including curve tracer, AF/RF signal generators, and frequency counter.	**ELECTRONICS RELATED THEORY II** **Grade 10** **Course #1782 Q.P. 1.00 1.00 Credit** The sophomores will learn scientific notation, use of metric prefixes, and complex numbers, and basic trigonometric relationships used in analyzing vector quantities in AC circuits. They will become familiar with the physical and electrical properties of passive and semiconductor components, and how to test and evaluate them. They will use various breadboard techniques to construct, troubleshoot, and analyze analog circuits such as power supplies, amplifiers, RC and LC oscillators, filters, and optical light sources and detectors. Students will learn how to use test equipment associated with these circuits such as curve tracer, AF/RF generators, distortion analyzer, and frequency counter.
ELECTRONICS III **Grade 11** **Course #0783 Q.P. 1.00 4.50 Credits** The juniors will learn how to recognize, test, and evaluate Digital Circuits. Students will	**ELECTRONICS RELATED THEORY III** **Grade 11** **Course #1783 Q.P. 1.00 1.00 Credit** The juniors will learn about the theoretical

learn about physical packaging of various types of integrated circuits, and about the electrical characteristics for various logic families such as TTL, low power TTL, Schottky TLL, CMOS, and ECL. Students will perform experiments implementing combinational logic circuits from schematic diagrams, truth tables, and Boolean algebra. Students will also build and evaluate sequential logic circuits using flip-flops. They will build, troubleshoot, and test computer circuits such as: counters, shift-registers, encoders, decoders, multiplexers, DE multiplexers, and arithmetic logic units.	aspects of digital electronic circuits. As a prelude to digital theory, students will learn about the binary, octal, and hexadecimal number systems. Students will also learn how to describe and manipulate computer logic using Boolean algebra. They will learn about logic gates, combinational logic, flip-flops and sequential logic. Students will apply their knowledge of logic to learn about digital computer circuits such as counters, shift-registers, encoders, decoders, multiplexers, DE multiplexers, and arithmetic circuits. Additionally, students will learn about different types of integrated circuit technology and logic families such as TTL, CMOS, and ECL.
ELECTRONICS IV **Grade 12** **Course #0784 Q.P. 1.00 4.50 Credits** Seniors will have the opportunity to build semiconductor-based projects. The year will start with an exploration into diodes and diode testing. From there, students will be able to design and build their own DC power supply. Next, students will explore transistor characteristics then use the gained knowledge to build a multi-stage amplifier. From there they will end the year with an exploration of operational amplifier analysis.	**ELECTRONICS RELATED THEORY IV** **Grade 12** **Course #1784 Q.P. 1.00 1.00 Credit** Seniors will be studying semiconductor electronics. Starting off with semiconductor theory students will quickly move into diode theory, then power supply design and testing. From there students will move onto transistor theory and spend a good deal of time exploring small signal amplifiers covering topics such as amplifier configuration, amplifier coupling, and negative feedback. Next, students will explore large signal amplifiers including class A, B, AB and C. Finally, the students will round out the year with an in-depth study of operational amplifiers covering topics such as setting gain and frequency effects.

GRAPHIC COMMUNICATIONS

GRAPHIC COMMUNICATIONS I
Grade 9
Course #0801 Q.P. 1.00 3.50 Credits

In the initial year of the Graphic Communications program, freshmen focus on building a strong foundation. The curriculum starts with an emphasis on shop safety to ensure a secure working environment. Students will be introduced to the basics of layout and design, multiple press and finishing operations, and an overview of the graphic communication field. They begin their journey with Adobe Creative Cloud, concentrating on Illustrator, InDesign, and Photoshop. Students will learn the fundamentals of screen printing, dye-sublimation, large format digital plotting and printing, embroidery, and digital printing. Students will be introduced to the bindery functions of folding, drilling, stitching, collating, booklet making, and padding operations for a comprehensive understanding of the production cycle.

GRAPHIC COMMUNICATIONS RELATED THEORY I
Grade 9
Course #1801 Q.P. 1.00 1.00 Credit

The student will be informed of the many facets of the trade from prepress computer design to press and bindery work. The student will understand the importance of safety within the shop environment. Students will be taught the fundamentals of all aspects of the trade with direct correlation to shop instruction. The areas covered are shop safety and health, an overview of the graphic communications field, introduction to graphic design, and careers in the graphic communications industry.

GRAPHIC COMMUNICATIONS II
Grade 10
Course #0802 Q.P. 1.00 3.50 credits

Sophomore year advances students' skills within Adobe Creative Cloud, encouraging them to develop proficiency in graphic design. The curriculum delves deeper into the elements and principles of design, crucial for effective communication through visual media. Students are taught the different systems of the presses for complete set-up and operation of the equipment. Students will learn about the Screen process working with one and two-color projects including T-shirts. Training will continue of bindery operations to reinforce the knowledge gained in freshman year. The operation and calculation of all paper cutting techniques will be taught. Students will learn about paper types and weights as they apply to the successful operation of the equipment. Students explore digital printing techniques,

GRAPHIC COMMUNICATIONS RELATED THEORY II
Grade 10
Course #1802 Q.P. 1.00 1.00 Credit

This course will build on the information gained in freshman year. Sophomores will be developing their knowledge in visual design, copyright laws, typography, and applied math, to correlate with the shop projects. Students will concentrate on screen printing to obtain their certification.

gaining hands-on experience in this integral aspect of graphic communications.	
GRAPHIC COMMUNICATIONS III **Grade 11** **Course #0803 Q.P. 1.00 4.50 Credits** At the junior level, students refine their design and layout skills, focusing on creating impactful visual content. There is an in-depth exploration of various printing processes, allowing students to understand the nuances and capabilities of each method. Students will concentrate on digital design and printing techniques. Four color registration, color matching, and calibration, mixing ink and bindery techniques will be reinforced during the first half of the junior year while in the shop's press area. Students will work on single color; two-color and four-color process work daily. Equipment maintenance is taught daily. Students will continue to use bindery equipment for producing booklets, brochures, forms, and other typical printing work. Students are trained in scoring, perforating, and folding operations. Students will continue to learn about multiple print operations. The curriculum also incorporates Occupational Safety and Health Administration (OSHA) standards, ensuring a comprehensive understanding of workplace safety. Opportunities for co-op experiences are introduced, providing students with practical industry exposure.	**GRAPHIC COMMUNICATIONS RELATED THEORY III** **Grade 11** **Course #1803 Q.P. 1.00 1.00 Credit** Project-based learning is emphasized junior year, OSHA Certification, multiple page layout, and color theory. The junior student will create a resume to utilize for their continuing education or in the work world. Students will build their skills to include making multi-page books covering different topics, printing color separations, quality control standards, job cost estimation and paper estimation.
GRAPHIC COMMUNICATIONS IV **Grade 12** **Course #0804 Q.P. 1.00 4.50 Credits** In their final year, seniors further hone their design and layout skills, working towards mastery in creating compelling visual content. The focus remains on printing processes, allowing students to deepen their expertise in these areas. Co-op opportunities continue, enabling students to apply their knowledge in real-world settings. Additionally, seniors work on building portfolios that highlight their best work, emphasizing their skills and creativity.	**GRAPHIC COMMUNICATIONS RELATED THEORY IV** **Grade 12** **Course #1804 Q.P. 1.00 1.00 Credit** Project based learning is emphasized for senior year. Students will be introduced to business functions and how to create their own business. Topics include ethics, money in everyday life, goal setting, and photography. Students will be doing more self-reliance and preparing for employability and career readiness.

The culmination includes certifications in Adobe Suite and Graphic Communications, validating their expertise and readiness for the professional landscape. They will study all areas of the discipline to gain a thorough understanding of techniques to better themselves in the workforce. Creation of work for the school involving the school brochure, shop pamphlets, and projects given to the senior student will enable them to produce a working portfolio of their work to present to the future employer using real world examples.	

HEALTH TECHNOLOGY (ASSISTING)

HEALTH TECHNOLOGY I **Grade 9** **Course #0691 Q.P. 1.00 3.50 Credits** Students will learn shop safety precautions, infection control measures, and correct body mechanics. Varied health care environments will be discussed. Students will work towards becoming proficient in bed making, vital signs, and general comfort measures. The students will be introduced to medical terminology. They will also have their first clinical rotation, which will allow them to apply what they have learned in a real-world experience.	**HEALTH TECHNOLOGY RELATED THEORY I** **Grade 9** **Course #1691 Q.P. 1.00 1.00 Credit** The focus of this year is infection and infection control. Also covered are the major body systems and the common disorders that accompany them. This will create a great resource with which they can use in the coming years.
HEALTH TECHNOLOGY II **Grade 10** **Course #0692 Q.P. 1.00 3.50 Credits** The sophomores are introduced to direct patient care skills, caring for the physical and emotional needs of patients/clients. They will also begin studies on some major illnesses, Alzheimer's, Diabetes Mellitus, and gastrointestinal diseases. Growth and development across the life span is a major focus this year. The students will attend clinical at a children's daycare and adult day health center.	**HEALTH TECHNOLOGY RELATED THEORY II** **Grade 10** **Course #1692 Q.P. 1.00 1.00 Credit** This year will be focused on first aid. The students will work with the curriculum for being an Emergency Medical Responder. The students will also complete the 10-hour OSHA course for healthcare, complete SkillsUSA fundamentals and become CPR/first-aid certified.
HEALTH TECHNOLOGY III **Grade 11** **Course #0693 Q.P. 1.00 4.50 Credits** Students will be preparing to take the state certification exam in nursing assisting. Their clinical rotations are at local long-term care facilities to perform direct patient care that they have perfected in the shop environment. Once they are CNAs, clinical rotations will involve a combination of acute care hospital/rehabilitation hospital/long-term care or go on CO-OP.	**HEALTH TECHNOLOGY RELATED THEORY III** **Grade 11** **Course #1693 Q.P. 1.00 1.00 Credit** This year will focus on the CNA curriculum and nutrition including how it relates to the function of the human body. Therapeutic diets will also be covered.
HEALTH TECHNOLOGY IV **Grade 12** **Course #0694 Q.P. 1.00 4.50 Credits** The seniors will continue their study of healthcare by participating in numerous clinical rotations at a local hospital. The students will study to become an EKG technician. Upon successful completion of the course will be able to take the national certification exam.	**HEALTH TECHNOLOGY RELATED THEORY IV** **Grade 12** **Course #1694 Q.P. 1.00 1.00 Credit** This year students will focus on human behavior in health and illness. This course is designed to help the student become a more thoughtful provider. The students will complete a senior research project on a topic of their choice.

HEATING, VENTILATION, AIR CONDITIONING, AND REFRIGERATION

HEATING – VENTILATION – AIR CONDITIONING – REFRIGERATION I **Grade 9** **Course #0971 Q.P. 1.00 3.50 Credits** Freshmen will practice safe work procedures. They will use a variety of hand tools. They will solder, braze, and learn to install ACR pipe. The students will practice safe wiring and learn to wire several circuits.	**HEATING-VENTILATION-AIR CONDITIONING- REFRIGERATION RELATED THEORY I** **Grade 9** **Course #1971 Q.P. 1.00 1.00 Credit** The freshmen will become familiar with good safety practices. They will identify and learn the use of hand tools. They will know the use of specialized tools and electrical test meters. The students will be able to identify types and sizes of refrigeration tubing and fittings. They will learn the basic refrigeration cycle and components. The students will learn electrical theory, concepts of matter and heat transfer.
HEATING-VENTILATION-AIR CONDITIONING-REFRIGERATION II **Grade 10** **Course #0972 Q.P. 1.00 3.50 Credits** The sophomores will test refrigerator parts, build, and wire a working refrigerator, and practice sealed system repair procedures. They will also diagnose and repair room air conditioners and car air conditioners. Refrigerant recovery and electrical troubleshooting are emphasized.	**HEATING-VENTILATION-AIR CONDITIONING-REFRIGERATION RELATED THEORY II** **Grade 10** **Course #1972 Q.P. 1.00 1.00 Credit** The sophomores will learn basic refrigeration. They will understand the controls, construction, and operating principles for domestic refrigerators, freezers, and room air conditioners. The students will learn the operation and individual components of split phase, permanent split capacitor, multiple speed, and shaded-pole motors. The students will be made familiar with various refrigerants, and procedures for evacuation and recharging refrigeration systems.
HEATING-VENTILATION-AIR CONDITIONING-REFRIGERATION III **Grade 11** **Course #0973 Q.P. 1.00 4.50 Credits** The juniors will practice safe procedures in commercial refrigeration service and central air conditioning service. They will install	**HEATING-VENTILATION-AIR CONDITIONING-REFRIGERATION RELATED THEORY III** **Grade 11** **Course #1973 Q.P. 1.00 1.00 Credit** Juniors will study commercial refrigeration and the related controls. They will learn central air conditioning and heat pump installation, service

commercial condensing units and evaporators and install and adjust pressure sensing and expansion devices. They will perform troubleshooting procedures on central air conditioning systems and heat pumps.	procedures and sizing. They will prepare for and take the EPA 608 federal certification exams. They will study low voltage controls and read schematic wiring diagrams.
HEATING-VENTILATION-AIR CONDITIONING-REFRIGERATION IV **Grade 12** **Course #0974 Q.P. 1.00 4.50 Credits** Seniors will practice safe procedures in diagnosing, installing, and repairing oil and gas heating systems. They will pipe an oil tank and install a forced hot water system. They will install oil burners and calculate their efficiency. They will practice wiring controls and troubleshooting.	**HEATING-VENTILATION-AIR CONDITIONING-REFRIGERATION RELATED THEORY IV** **Grade 12** **Course #1974 Q.P. 1.00 1.00 Credit** Seniors will study for the Massachusetts Oil Burner Service License. They will practice determining heat loads. They will practice sizing and estimating the cost of heating systems. They will learn how to wire an oil burner system.

INFORMATION SUPPORT SERVICES AND NETWORKING

INFORMATION SUPPORT SERVICES AND NETWORKING I **Grade 9** **Course# 0791 Q.P. 1.00 3.50 Credits** The ISSN (Information Support Services and Networking) career area is designed to introduce students to Computer System Support and Networking. Students will be trained in the latest industry help desk concepts, end user Operating System Software support, Server Configuration and Administration, Computer Network Administration and Support, Web Technologies, Cyber Security and Wireless and Mobile Device Support. Students will have the opportunity to obtain certifications in A+, Network+, Linux+, Microsoft Technical Associate, Cisco Certified Entry Level Networking Technician (CCENT) and Security+. Overall health and shop safety topics will be covered upon entry in the shop and reviewed in subsequent years.	**INFORMATION SUPPORT SERVICES AND NETWORKING RELATED THEORY I** **Grade 9** **Course# 1791 Q.P. 1.00 1.00 Credit** This course is designed to instruct students on how a computer system functions. Topics covered will be a precursor to the CompTIA A+ certification offered in the junior and senior years. Trends in the workforce and work ethics will be introduced as part of help desk procedures, which include troubleshooting systems and proper phone support etiquette.
INFORMATION SUPPORT SERVICES AND NETWORKING II **Grade 10** **Course# 0792 Q.P. 1.00 3.50 Credits** The sophomore level curriculum concentrates on computer hardware specifications related to the CompTIA A+ certification. Certification testing in CompTIA A+ will be offered at the end of the junior year. Hands–on training will include building and repairing computers along with OS installs and network maintenance. Windows and Linux OS Installation and Support, Mobile Devices Support, and Windows Networking Support will be covered. Installation, maintenance, and configuration of servers, switches, and firewalls are introduced in the sophomore year, allowing the students to understand network and workstation operations. Overall health and safety topics related to the	**INFORMATION SUPPORT SERVICES AND NETWORKING RELATED THEORY II** **Grade 10** **Course# 1792 Q.P. 1.00 1.00 Credit** This course teaches the sophomore student customer service skills related to end user and computer network support. The course also further explores topics in preparation for the CompTIA A+ and Network+ certifications. Concepts taught in this course allow the students to put these related theories into practice in the shop environment as well as prepare for certifications in this field of study. OSHA testing during this year of study will allow students to test their understanding of health and safety concepts related to their chosen field.

field of study will be reviewed as a segue to the OSHA test conducted in Related Theory.	
INFORMATION SUPPORT SERVICES AND NETWORKING III **Grade 11** **Course# 0793 Q.P. 1.00 4.50 Credits** The junior year will teach network administration including server maintenance, switch configuration, and wireless access management with a review of trade safety procedures. The junior student will also be introduced to cyber security principles which will be expanded in the program's final year. This course goes beyond the basics of help desk concepts and prepares the student for network-level certifications. At this point, the junior student will be given the option to take the CompTIA A+ and Network + certifications. Basic programming principles, web administration, introduction to Cisco Networks and Net Academy, Network+, Microsoft MTA Certification Studies, Cyber Security, and Security+ will be covered to better prepare students for the broad range of concepts associated with the ISSN field of study.	**INFORMATION SUPPORT SERVICES AND NETWORKING RELATED THEORY III** **Grade 11** **Course# 1793 Q.P. 1.00 1.00 Credit** The junior year related theory program reviews network management and configuration concepts. Topics include server installation and management, wireless communication configuration, and management as well as cyber security threats and prevention techniques. Students will learn topics that can be applied to network and system management. Extensive exam preparation and review will prepare students for the CompTIA tests offered in the shop environment.
INFORMATION SUPPORT SERVICES AND NETWORKING IV **Grade 12** **Course# 0794 Q.P. 1.00 4.50 Credits** The senior year will focus on CISCO, HP, and NETGEAR switch configuration; network management which includes firewall configuration; and a review of safety procedures. The students will be trained to install and maintain a network environment running a host of physical and virtual servers. They will experience Cisco CCENT Certification Studies, Cisco Routing and Switching, HP Switch Configuration, Firewall Configurations, and the Internet of Things (Remote Monitoring). Cyber security will be one of the concentrations during the senior year and will allow the students to learn preventative security techniques.	**INFORMATION SUPPORT SERVICES AND NETWORKING RELATED THEORY IV** **Grade 12** **Course# 1794 Q.P. 1.00 1.00 Credit** This capstone related theory course prepares students for taking various certification-related hardware and network practices covered in past courses. Students will review CISCO Network and Microsoft Technical Associate certifications. As conducted in the junior year, certification testing focused on CISCO and Microsoft will be offered to all students as well as past CompTIA A+ and Network+ tests if students missed those opportunities. Cyber Security will also be covered which prepares the student to further their studies at the higher education level or enter the work force in an entry level position.

MASONRY & TILE SETTING

MASON & TILE SETTING I **Grade 9** **Course #0841 Q.P. 1.00 3.50 Credits** The freshmen will learn how to prepare and set-up a work area, learn safe work practices, and demonstrate employable skills. Students will also learn how to handle the different tools of the trade, and how to mix and use mortar. They will also learn how to lay brick and block to line.	**MASON & TILE SETTING RELATED THEORY I** **Grade 9** **Course #1841 Q.P. 1.00 1.00 Credit** The students will learn safe work practices, focusing on shop safety. They will also learn the various career opportunities in the masonry field coupled with a history of the trade, a brief exposure to the basic tools, measuring devices, and materials, while developing an awareness of the skills necessary to succeed in a masonry career.
MASON & TILE SETTING II **Grade 10** **Course #0842 Q.P. 1.00 3.50 Credits** Students will learn to level, plumb, and range brick and block walls, construct stonewalls, block piers, and basic concrete finishing. Students will learn to cut masonry materials using a hammer, brick set, or a wet saw. Students will learn to build brick and block corners using a variety of materials. Students will be exposed to building layout and advanced brick patterns, and basic principles of tile setting.	**MASON & TILE SETTING RELATED THEORY II** **Grade 10** **Course #1842 Q.P. 1.00 1.00 Credit** The students will learn the history of cement, brick, and block. The students will also learn how to estimate brick, block, concrete, and other related masonry materials for small projects. The students will also learn the types and properties of mortar.
MASON & TILE SETTING III **Grade 11** **Course #0843 Q.P. 1.00 4.50 Credits** Students will be exposed to chimney and fireplace layout and construction. Students will understand chimney specifications and codes. Students will be exposed to all types of masonry hardscapes, stone, and step construction.	**MASON & TILE SETTING RELATED THEORY III** **Grade 11** **Course #1843 Q.P. 1.00 1.00 Credit** The juniors will learn how to read simple blueprints and how to estimate small buildings. The student will also learn the secrets of building a successful fireplace and how to build footings and foundation walls. The students will also learn the history of fireplaces and Masonry stoves.

MASON & TILE SETTING IV **Grade 12** **Course #0844 Q.P. 1.00 4.50 Credits** The seniors will do various types of remodeling work usually found around the home, such as; garden walls, brick paving, and tile. The student will also build walls made of stone.	**MASON & TILE SETTING RELATED THEORY IV** **Grade 12** **Course #1844 Q.P. 1.00 1.00 Credit** The seniors will learn how to measure and draw templates for arches, and cornice work. The students will learn different formulas for estimating larger jobs. The students will learn different bonds associated with stonework.

METAL FABRICATION & JOINING TECHNOLOGY

METAL FABRICATION & JOINING TECHNOLOGIES I **Grade 9** **Course #0861 Q.P. 1.00 3.50 Credits** The freshmen will name and know the use of all the tools commonly found in a sheet metal shop. They will learn to safely operate selected pieces of equipment found in the school metal fabrication program. They will learn to fabricate objects using simple shop drawings and will observe and carry out all safety principles regarding machine use, proper clothing, and good housekeeping. Students will learn how to properly solder sheet metal fittings. Additionally, the freshmen will learn safety, setting up and connecting welding equipment and proper methods of manipulating the torch. Perform common welding joints and welding positions, and how to do this type of welding with and without a welding rod will be covered. The basics of braze welding and cutting of steel along with basic arc welding and how to hold and maintain an arc will be studied.	**METAL FABRICATION & JOINING TECHNOLOGIES RELATED THEORY I** **Grade 9** **Course #1861 Q.P. 1.00 1.00 credits** The freshmen will learn the basic operations and safety of hand tools, plus some of the basic machines. They will be able to identify some of the basic metals, their thickness, and uses. They will learn basic shop drawing and layout work by the proper use of mechanical drawing equipment. Additionally, the students will learn the safe use of Oxy-fuel welding and brazing equipment and supplies. They will learn the use of basic arc welding equipment and supplies and will start the basic theory for shielded metal arc welding.
METAL FABRICATION & JOINING TECHNOLOGIES II **Grade 10** **Course #0862 Q.P. 1.00 3.50 Credits** The sophomores will learn to safely operate all pieces of equipment found in the metal fabrication shop, make and read simple shop drawings, and be able to fabricate objects from them. The students will learn how to properly layout and fabricate wrought Iron Railings. Additionally, the sophomores will learn safety and care of the welder and welding equipment. Students will learn steel preparation and rod selection, as well as arc welding in all positions for mild steel. The students will also learn the basics of micro-wire welding.	**METAL FABRICATION & JOINING TECHNOLOGIES RELATED THEORY II** **Grade 10** **Course #1862 Q.P. 1.00 1.00 Credit** Sophomores will learn blueprint reading, drawing, layout and shop math. They will learn how to apply them to shop projects. Students will also learn to safely set up and operate all pieces of power machinery in our metal fabrication shop. Additionally, students will learn shielded metal arc welding, AC-DC operation, along with electrode care, operating ranges and power supplies. They will also learn basic mig welding operations using state-of-the-art equipment.

METAL FABRICATION & JOINING TECHNOLOGIES III **Grade 11** **Course #0863 Q.P. 1.00 4.50 Credits** Juniors will learn to safely operate all pieces of equipment found in the metal fabrication shop, make shop drawings and fabricate projects and fittings from them. They will assemble and install fittings for ductwork in air conditioning, heating, and exhaust systems. Also, the juniors will learn how to set up the micro-wire welding machine for the different welding operations and how to weld light metals and heavy metals in all positions using different types of welding joints. The students will also learn the proper use of plasma arc cutting and the basics of gas tungsten arc welding.	**METAL FABRICATION & JOINING TECHNOLOGIES RELATED THEORY III** **Grade 11** **Course #1863 Q.P. 1.00 1.00 Credit** The juniors will learn blueprint reading, drawing, layout for heating, ventilating, and air conditioning, along with precision sheet metal mathematics. Additionally, the juniors will learn the theory of gas tungsten welding equipment and supplies along with its safe operation. They will learn the theory of current, power, and electrodes for the metals to be welded; and they will learn about inert and shielding welding gases, mig welding wires, and plasma arc cutting theory.
METAL FABRICATION & JOINING TECHNOLOGIES IV **Grade 12** **Course #0864 Q.P. 1.00 4.50 Credits** The seniors will learn to perform, with proficiency, all operations learned and reviewed in the previous three years. They will be able to operate safely all pieces of equipment found in the metal fabrication shop. Their skills will be limited only by a student's ability and willingness to indulge themselves in their work. Students will also be given greater latitude to concentrate on that part of the trade that they prefer or have shown aptitude. Also, the seniors will learn safety and care of gas tungsten arc welding equipment and basic skills in welding aluminum, stainless steel, and mild steel in the different positions using different types of welding joints. Destructive and non-destructive testing will be taught. Seniors will prepare and take the AWS D.15 welding certification test.	**METAL FABRICATION & JOINING TECHNOLOGIES RELATED THEORY IV** **Grade 12** **Course #1864 Q.P. 1.00 1.00 Credit** The seniors will learn advanced blueprint reading and drawing. They will learn the theory of layout work, including parallel line development, radial line development, triangulation and shortcut methods of layout. Seniors will learn the applications of special non-ferrous welding. They will also learn inspection and testing of weldments, heat treatments of metals, metal surfacing, and welder qualification.

PLUMBING

PLUMBING I **Grade 9** **Course #0951 Q.P. 1.00 3.50 Credits** Students begin their plumbing education with foundational plumbing skills, including pipe measuring, cutting, reaming, and joining various types of pipe such as copper tubing using flared, soldered, and compression methods, and black steel using hand thread and machine thread methods. They practice safe use of tools, valves, and torches, and are introduced to basic water distribution, drainage principles, pipe sizing, residential blueprint reading, and trade mathematics. Safety is emphasized throughout.	**PLUMBING RELATED THEORY I** **Grade 9** **Course #1951 Q.P. 1.00 1.00 Credit** This introductory course provides freshmen with a foundational understanding of the plumbing trade through the study of history, career pathways, and an introduction to the Massachusetts Plumbing Code (248 CMR). Instruction covers reading tape measures, manipulating fractions of the tape measure, plumbing definitions, materials, tools, valves, and devices. Fundamental trade skills are developed through the integration of trade math, blueprint interpretation, and precision measurement. This course emphasizes workplace safety and includes formal Ladder Safety Training.
PLUMBING II **Grade 10** **Course #0952 Q.P. 1.00 3.50 Credits** Sophomores build on their foundational skills by mastering new materials, tools, and joining methods. Practical training includes the installation, repair, and maintenance of valves, potable water systems, water heaters, and fixtures. Students also begin exploring drainage systems, specifically plumbing traps, cleanouts, and the preparation of various piping. Instruction extends to gas systems (Natural Gas vs. Propane), gas codes, and venting, as well as hangers and anchoring. Ladder safety, blueprint reading, and trade math are integrated into every module to ensure total job-site readiness.	**PLUMBING RELATED THEORY II** **Grade 10** **Course #1952 Q.P. 1.00 1.00 Credit** Building on core fundamentals, students apply Massachusetts Plumbing Code (248 CMR) to material installation, hanger spacing, and trap protection. Training includes advanced sizing calculations, blueprint reading, and the technical mechanics of toilets, faucets, and water heaters. Safety and professional standards are prioritized, with students earning both their OSHA 10-Hour and HOTWORKS certifications.
PLUMBING III **Grade 11** **Course #0953 Q.P. 1.00 4.50 Credits** Junior year transitions students into high-level, real-world applications. Students will master the measuring, cutting, and joining of no-hub,	**PLUMBING RELATED THEORY III** **Grade 11** **Course #1953 Q.P. 1.00 1.00 Credit** Junior year provides an advanced immersion into the Massachusetts Plumbing Code (248 CMR).

service weight, and extra-heavy cast iron. Students advance to complex system installations across residential, commercial, and light industrial settings, covering everything from sewer ejectors and water heaters to storm drains and septic systems. A heavy focus is placed on advanced venting configurations, including stack, yoke, circuit, wet, and specialty venting. By integrating blueprint reading, trade mathematics, and rigorous testing methods, students prepare for apprentice-level field work. This year marks the beginning of hands-on work on the outside House Project and heating system installations, with students becoming eligible for Co-op opportunities.	Students master the interpretation and compliance of complex systems, including venting, drainage, potable water, storm drains, and gas systems. Specialized instruction covers treatment for petroleum distillates and special wastes, alongside the rigorous study of backflow prevention and material approval. The curriculum bridges theory and practice by examining the scientific principles of flow, pressure, and heat transfer. Students refine their layout and design skills for water mains and multi-fixture systems through advanced blueprinting. Additionally, hydronic heating and gas systems are analyzed from a theoretical perspective, focusing on combustion principles, venting, and safety protocols to ensure full job-site readiness.
PLUMBING IV **Grade 12** **Course #0954 Q.P. 1.00 4.50 Credits** Seniors culminate their training by applying four years of comprehensive expertise to high-level residential and commercial projects. Students master the installation, repair, and maintenance of specialized fixtures—ranging from wall-hung and floor-mounted water closets to commercial urinals and sinks. The curriculum covers the full spectrum of mechanical systems: venting, drainage, potable water, storm drains, and advanced gas fitting. With a focus on 248 CMR code compliance, trade mathematics, and rigorous testing methods, students are prepared for immediate entry into employment or registered apprenticeships. This final year prioritizes real-world experience through the Co-op program or the on-site House Project, where students gain hands-on proficiency in the installation and troubleshooting of high-efficiency boilers and water heaters.	**PLUMBING RELATED THEORY IV** **Grade 12** **Course #1954 Q.P. 1.00 1.00 Credit** Seniors integrate their cumulative expertise to design, analyze, and troubleshoot complex plumbing systems. Students apply the Massachusetts Plumbing Code (248 CMR) to real-world challenges in venting, drainage, potable water, and gas systems. Beyond technical proficiency, students explore the business of the trade. Instruction covers essential professional responsibilities, including accurate job estimating, labor cost calculations, material pricing, and overhead management. By blending advanced trade mathematics with blueprint-driven design, students graduate prepared for the technical and financial demands of a professional apprenticeship.

PROGRAMMING & WEB DEVELOPMENT

The Programming & Web Development curriculum consists of programming fundamentals taught through the AP Computer Science Principles course in Python, algorithm-based thinking taught through the AP Computer Science A course in Java, and a variety of projects incorporating visual programming and game development, virtual reality, mobile robotic platforms, humanoid robotics, and professional applications. Students are also trained in HTML, CSS, JavaScript, various dynamic web development frameworks, and both relational and non-relational databases using Windows and Linux-based operating systems. Students are prepared to enter the field as a junior developer or pursue a post-secondary degree in Computer Science.

FRESHMAN EXPLORATORY

The Programming and Web Development exploratory program is designed to provide the students with an overview of the topics that will be covered if they select Programming and Web Development as their career choice. The one-week curriculum exposes students to four topics: web development with HTML & CSS, programming fundamentals using Python, game development using the Unity game engine and C#, and finally robotics using the NAO humanoid robot platform and various wheel-based platforms, incorporating microcontrollers and various sensors. Students will also see presentations of upperclassmen projects to get a perspective on what is possible throughout our four-year program.

PROGRAMMING & WEB DEVELOPMENT 1
Grade 9
Course #0701 Q.P. 1.00 3.50 Credits

The freshman shop program is an introduction to computer science, programming fundamentals, and web development. The programming concepts will be taught using the Python programming language. Students will be trained in developing both business and game development applications and their design and testing. Students will learn basic programming concepts including identifying and using data types, implementing control structures, and the creation of procedures. Web development will be introduced using HTML5 and CSS3. It will focus on implementing basic HTML structures, formatting elements using CSS, and page layout techniques. Students will be introduced to humanoid robotics using the NAO robot platforms and various wheel-based platforms, incorporating microcontrollers and

PROGRAMMING & WEB DEVELOPMENT RELATED THEORY I
Grade 9
Course #1701 Q.P. 1.00 1.00 Credit

The freshman related program focuses on an introduction to computer science. Students will study the history of computer science, number conversions, image manipulations using Photoshop, how to plan and discuss algorithms using pseudocode and flowcharts, and web page design concepts using wireframes. Students will learn how to utilize Git as a source code repository, branching and merging procedures, and how to properly deal with merge conflicts. Students will become familiar with the GitHub environment and available documentation tools provided on the platform. Students will become familiar with the Windows and Linux-based operating systems and how to navigate the file system through the available command line interface. Students will study various career

various sensors.	options and the required knowledge to enter these careers in an entry-level position.
PROGRAMMING & WEB DEVELOPMENT II **Grade 10** **Course #0702 Q.P. 1.00 3.50 Credits** The sophomore shop program aligns with the College Board AP Computer Science Principles course. Students have the opportunity to register for and complete the AP Exam in May of their sophomore year. The course covers the exploration of the computer science field, creativity, abstraction, data and information, algorithms, the internet, the global impact of computer science, computational thinking practices, and Python fundamentals that are in line with a first-year college programming course. Students will also build on the basic web concepts from freshman year covering current web development and design practices, complex page layouts, dynamic menus, and incorporating interactive web elements into their design using JavaScript. Students will also advance their knowledge in programmable robotics through embedded systems using microcontrollers and the Raspberry Pi.	**PROGRAMMING & WEB DEVELOPMENT RELATED THEORY II** **Grade 10** **Course #1702 Q.P. 1.00 1.00 Credit** The sophomore related program focuses on front-end web design, popular content management systems, and relational database concepts. Students will begin the year learning about color theory, accessibility, trending web technology, and client expectations for common pages of a website. Sophomores will learn about SQL Databases using Oracle Apex. They will understand what a database is, the entity-relationship model, how to query and update data, how to create tables with constraints, and join data across multiple tables. Sophomores will be expected to complete the school-wide requirement of the SkillsUSA Career Essentials modules. Students will be introduced to popular content management systems, such as WordPress, where they will update content, modify themes, and configure plugins. Students will end the year learning about different 3rd party CSS libraries to enhance the look and feel of their websites.
PROGRAMMING & WEB DEVELOPMENT III **Grade 11** **Course #0703 Q.P. 1.00 4.50 Credits** The junior shop program aligns with the College Board AP Computer Science A course. Students can register for and complete the AP Exam in May of their junior year. The curriculum is taught through the Java programming language and focuses on fundamental algorithms and data structures involving control structures, one and two-dimensional arrays, lists, object-oriented programming, inheritance, abstract classes, interfaces, and recursion. Students will be introduced to the MVC pattern using Ruby on Rails to create their own custom content management system. Students will learn to work with the Active Record pattern and object relational mapping to implement 1 to 1, 1 to many, many to many, and polymorphic associations.	**PROGRAMMING & WEB DEVELOPMENT RELATED THEORY III** **Grade 11** **Course #1703 Q.P. 1.00 1.00 Credit** The junior related program builds on front-end web development concepts and expands to non-relational databases and hosting options. Students will be creating responsive websites using the front-end toolkit, Bootstrap. They will incorporate third-party JavaScript libraries into their websites to create unique user interactions and functionality (e.g. Glide.js for slideshows, Validator.js for form validation, and ToastUI for calendars). Juniors will learn about non-relational databases using MongoDB. They will learn how to configure their own MongoDB instance, compare and contrast collections and documents to SQL tables and records, and how to use the API to retrieve, insert, update, and delete documents. Juniors will also dive into more advanced

Projects will consist of common functionality requirements for small to medium sized business websites.	WordPress concepts such as developing their own themes and plugins, focusing on functionality requirements for small to medium sized business websites. Juniors will also obtain their 10-hour OSHA certification making them eligible for COOP and meeting one of the graduation requirements.
PROGRAMMING & WEB DEVELOPMENT IV **Grade 12** **Course #0704 Q.P. 1.00 4.50 Credits** The senior shop program will be a continuation of junior year, with a focus on back-end web development, server and client-side JavaScript, advanced data structures, and design patterns. Students will build scalable web applications with authentication and authorization systems involving roles and permissions, contribute to the ongoing development of the school website, and will explore JavaScript web stack options. Students will learn to work with trees, heaps, and hash tables and have a foundational understanding of creational, structural, and behavioral design patterns. Students will understand the importance of algorithm analysis and learn techniques for analyzing time complexity (Big O notation). Students will also have the opportunity to work on customer-based projects for various nonprofit organizations and shop capstone projects of their choice.	**PROGRAMMING & WEB DEVELOPMENT RELATED THEORY IV** **Grade 12** **Course #1704 Q.P. 1.00 1.00 credits** The senior related program focuses on modern web development technologies and portfolio creation. Seniors will learn how to create a database driven mobile application using React Native. Students will leverage software, like Expo Go, to test their program and explore options for publishing their app to the app store. Students will enhance their applications by learning about search engine optimization and analytics using Google tools such as Google Analytics and Google PageSpeed Insights. Students will also learn about website accessibility and check their projects for compliance using Chrome browser plugins such as Lighthouse. Before graduation, Seniors will complete their portfolios and participate in mock job interviews to prepare them for their career in computer science.

VETERINARY/ANIMAL SCIENCE

The Bay Path Veterinary Science program is designed for those students who are passionate about animals and their wellbeing and want to become members of a veterinary healthcare team. Instruction using well-equipped classroom and laboratory facilities allows Bay Path to provide the education and hands-on training needed to succeed in a productive and rewarding career as a veterinary assistant. Students are introduced to animal care and nursing, grooming, restraint techniques, surgical assisting, laboratory procedures, diagnostic imaging, medical terminology, anatomy, office procedures, client services, and maintenance of equipment and facilities. Bay Path is partnering with Second Chance Animal Services where our students will have the opportunity to apply and develop their skills. With Second Chance, students work alongside veterinary science professionals in "real-world" situations in a well-equipped, state-of-the-art, fully operational veterinary hospital. With this education and work-based experience, our graduating students will be "first day ready" for employment as veterinary assistants. They will be prepared to support licensed technicians and veterinarians in providing animal health care in a variety of settings, including animal hospitals, clinics and animal shelters, kennels and grooming facilities; or they will be well prepared to further their education in pursuit of advancing their career in other veterinary science professions. Other Animal Science related industries will be included under the umbrella of Veterinary/Animal Science.

FRESHMEN EXPLORATORY

The Veterinary/Animal Science exploratory program is designed to provide the students with an overview of the topics that will be covered if they select Veterinary/Animal Science as their career choice. The one-week curriculum focuses on four topics: introduction to animal care and nursing, office procedures, client services, and maintenance of equipment and facilities.

VETERINARY/ANIMAL SCIENCE I
Grade 9
Course #0981 Q.P. 1.00 3.50 Credits

During the freshmen year, students are introduced to components of the veterinary/animal science industry environment, the day-to-day tasks of the veterinary assistant, animal restraint techniques, and OSHA workplace safety. Topics include facility and equipment maintenance; utilizing veterinary practice management software; cleaning and disinfecting animal cages, exam rooms, and treatment areas; placement in and removal of animals from their enclosures; restraint equipment and methods used during exams, medications and procedures; attending to the daily caretaking needs of the animals such as feeding, walking and providing water and clean bedding; and complying with OSHA veterinary facilities standards. These skills can be applied at the on-site full-service Second Chance Animal Hospital. Animal Science-related industry

VETERINARY/ANIMAL SCIENCE RELATED THEORY I
Grade 9
Course #1981 Q.P. 1.00 1.00 Credit

During the freshmen year, students are introduced to small animals and the veterinary/animal science profession. Topics include roles and responsibilities of veterinary/animal science industry team members: personal qualifications, professionalism, and ethics; laws, policies and OSHA standards affecting veterinary practice; animal species, breeds and classifications. Animal Science related industry opportunities will also be included specifically in the area of kennel management, grooming, retail, farming, and lab animals. Through completing various classroom activities, students develop and strengthen the knowledge and skills identified in Strand 6 of the CVTE Frameworks – Technology Literacy Knowledge and Skills.

opportunities will also be included in kennel management, grooming, retail, farming, and lab animals.	
VETERINARY/ANIMAL SCIENCE II **Grade 10** **Course #0982 Q.P. 1.00 3.50 Credits** Students obtain their Pet CPR and First Aid Certification and are introduced to the veterinary assistants' role in the examination room. They learn preventative care protocol. Additionally, the students learn how to comply with OSHA regulations applicable to veterinary offices. Topics include obtaining required documentation; examination room preparation; the identification of and the safe use of instruments and supplies used to perform diagnostic tasks, physical examinations, and pet grooming services. As the year progresses, students can apply these skills at the on-site full-service Second Chance Animal Hospital. Animal Science related industry opportunities will also be included specifically in the area of kennel management, grooming, retail, farming, and lab animals.	**VETERINARY/ANIMAL SCIENCE RELATED THEORY II** **Grade 10** **Course #1982 Q.P. 1.00 1.00 Credit** During the sophomore year, students are introduced to veterinary terminology and animal anatomy and physiology. Students also attain their OSHA 10-Hour Health Occupations certification. Topics include breeds of cats and dogs; nutritional requirements; small animal's skeletal and body system; and the common medical terms and language used in the animal hospital to describe procedures and animal body regions and anatomical terms of direction. Animal Science related industry opportunities will also be included specifically in the area of kennel management, grooming, retail, farming, and lab animals.
VETERINARY/ANIMAL SCIENCE III **Grade 11** **Course #0983 Q.P. 1.00 4.50 Credits** Students learn skills to best serve the animal hospital staff before, during, and after a surgical procedure. Topics include animal care, sterilization methods for instruments and supplies, operating room sanitation and care protocol, operation and maintenance of autoclaves, appropriate care of common surgical equipment and supplies, and the proper disposition of hazardous medical wastes. Throughout the year, students participate in clinical rotations through the different services offered at the on-site full-service Second Chance Animal Hospital. Students are eligible for cooperative education opportunities mid-way through their junior year. Animal Science related industry opportunities will also be included specifically in the area of kennel management, grooming, retail, farming, and lab animals.	**VETERINARY/ANIMAL SCIENCE RELATED THEORY III** **Grade 11** **Course #1983 Q.P. 1.00 1.00 Credit** In the junior year, students are introduced to veterinary hospital front office procedures and operations management. Topics include telephone etiquette, medical records assembly, admitting and discharging patients, billing, and customer service. Through the completion of a variety of classroom activities, students develop and strengthen the knowledge and skills identified in Strand 4 of the CVTE Frameworks - Employability and Career Readiness. Topics include career exploration and navigation, communication in the workplace, work ethic, and professionalism. Animal Science related industry opportunities will also be included specifically in the area of kennel management, grooming, retail, farming, and lab animals.

VETERINARY/ANIMAL SCIENCE IV Grade 12 Course #0984 Q.P. 1.00 4.50 Credits	VETERINARY/ANIMAL RELATED THEORY IV Grade 12 Course #1984 Q.P. 1.00 1.00 Credit
Students are taught proper radiology and ultrasound techniques as a means of diagnosis. Topics include principles of x-ray generation, proper patient positioning, safety measures and guidelines, and radiology record keeping procedures. Throughout the year, students review and practice each of the skills needed to earn their American Veterinary Medical Association (AVMA) Veterinary Assistant Certification. If a student is not participating in the cooperative education program, he/she continues their clinical rotations through the different services offered at the on-site full-service Second Chance Animal Hospital. Animal Science-related industry opportunities will also be included in kennel management, grooming, retail, farming, and lab animals.	In the senior year, students study veterinary pharmacy and pharmacology. Topics include types and groups of drugs, dosage forms and calculations, identification of the proper routes and methods of drug and vaccine administration, inventory control, and the proper prescription labeling and packaging of medications. Also, through completing various classroom activities, students develop and strengthen the knowledge and skills identified in Strand 5 of the CVTE Frameworks - Management and Entrepreneurship Knowledge and Skills. Topics include starting, managing and marketing a business; financial concepts; and legal, ethical, and social responsibilities for businesses. Animal Science-related industry opportunities will also be included in kennel management, grooming, retail, farming, and lab animals.