



## Grade 11 Academic Courses 2020-2021

### English Options:

- **English 11 (CP, ACP, H)**
- **A.P. English Language and Composition**

### Math Options:

- **Algebra II (CP, ACP, H)**
- **Pre-Calculus (H)**

### History Options:

- **United States History II (CP, ACP, H)**
- **A.P. United States History**

### Lab-Based Science Options:

- **Chemistry (CP, ACP, H)**
- **Physics (CP, ACP, H)**
- **Sustainability Science (CP)**

### Elective Options:

- **Spanish I (CP, ACP)\***

NOTE: MA public colleges and universities do not require two years of foreign language for students enrolled in public CVTE high school programs. See:

[www.mass.edu/shared/documents/admissions/admissionsstandards.pdf](http://www.mass.edu/shared/documents/admissions/admissionsstandards.pdf) p.8. In addition, many MA private colleges and institutions and out of state public and private institutions do not require two years of high school foreign language, however admissions requirements at these institutions vary. Families are encouraged to preview admissions requirements on the college and university websites to plan accordingly during the course selection period.

- **Law and the Workplace (CP)\***
- **Business and Entrepreneurship (CP)\***
- **Intro to Computer Science (CP)**
- **Sustainability Science (CP)**

**BOLD denotes required content course.**

*\*Term length is semester based*



### **English 11**

**Course #: 1302, 1301, 1300**

**Level: Honors, ACP, CP**

This course examines American literature through fiction, nonfiction, poetry and drama from multiple perspectives. Students will analyze texts through stylistic, social, economic, historical, and critical lenses. The emphasis of this course is evaluating the relationship between form and content in a literary work, and then analyzing how both the author's intent and reader's perspective illuminate the meaning of the text. Students will produce short narratives, dramatic scenes, oral presentations, and analytical essays. *Credits: 4*

### **Advanced Placement English Language & Composition**

**Course #: 1303**

**Level: AP**

In the A.P. English Language and Composition course—the rhetoric course—students learn how to analyze, synthesize, and evaluate nonfiction texts, including essays, biographies and autobiographies, speeches, sermons, and passages from writings in the arts, history, social science, politics, science, and other areas of study. Students learn to evaluate and construct arguments drawn from articles in newspapers, magazines, and online “zines” and “blogs.” The course cannot help but be interdisciplinary, immersing students in a variety of sources. Students are expected to take the College Board A.P. English Language and Composition Exam in May. College credit may be applied with a score of three or higher on the College Board exam. *Credits: 4*

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### **Algebra II**

**Course #: 2302, 2301, 2300**

**Level: Honors, ACP, CP**

This course is a continuation of algebraic concepts. Topics include functions and graphs and more complex problem solving, complex numbers, matrices to solve linear systems, vectors, analytic trigonometry, and relates the connections between the fundamental concepts of algebra, trigonometry and analytic geometry. Several standards in the Algebra II course were moved to the Enhanced Algebra I course which made it possible to add standards from the Pre-calculus Course to the Enhanced Algebra II course. In this way students will be prepared for Calculus after successful completion of Enhanced Algebra II. This is a course which covers material at a fast pace and in great depth, with the expectation of stronger student performance. A greater emphasis will be placed on algebraic approaches to problem-solving. *Credits: 4*



### **Pre-Calculus**

**Course #: 2322**

**Level: Honors and ACP**

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

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### **United States History II**

**Course #: 4302, 4301, 4300**

**Levels: Honors, ACP, CP**

This course completes the second part of a sequence of United States history begun in Grade 10, by examining the major events in U.S. history from World War I to the 1960s. Major units include the study of World War I, the Great Depression and the New Deal, the Rise of Dictators, World War II, the Cold War, Civil Rights, the Vietnam War and Social Changes in the 1960s. As in previous years, students will continue to refine their critical reading and analytical writing, source evaluation, use of primary source documents, ability to make claims, evidence, and interpretation, and research methods. Honors students will pursue an accelerated program adding document analysis, debate, and rigorous practice writing supported essays based on synthesizing multiple sources. Please note that the U.S. History II Honors program is a pre-Advanced Placement curriculum that will require regular and significant preparation by reading and writing outside of class. **Credits: 4**

### **Advanced Placement United States History**

**Course #: 4303**

**Level: AP**

A.P. United States History is designed to give grade 11 students a thorough understanding of United States History, requiring students to master historical interpretation, critical and analytical thinking, essay writing, and the integration of primary and secondary sources. The class prepares students to assess historical data and documents, evaluate relevance and reliability, and demonstrate historical knowledge of United States History. This course is equivalent to a full-year introductory college class and, therefore, all students enrolled in this course are expected to demonstrate their content mastery by taking the Advanced Placement exam in May. Please note that summer work is required. **Credits: 4**



### **Chemistry**

**Course #: 3302, 3301, 3300**

**Level: Honors, ACP, CP**

This course is designed to teach students the concepts of composition, structure and properties of substances and the changes they will undergo. Topics will include the classification of matter, atomic structure, periodic table and chemical formulas, chemical reactions and gas laws. Students will utilize qualitative as well as quantitative approaches to predict outcomes and identify unknowns. Use of a scientific calculator is required. Strong math skills are recommended for the Honors Level. **Credits: 4**

### **Physics**

**Course #: 3312, 3311, 3310**

**Level: Honors, ACP, CP**

This Physics course will introduce key concepts of the physical world including motion, energy, and electromagnetism. Hands on labs will reinforce these concepts. Measurement and problem solving including graphing and critical thinking will be introduced. Technology will be used to analyze data collected in lab activities. Use of a scientific calculator is required. Strong math skills are recommended for the Honors Level. **Credits: 4**

### **Sustainability Science**

**Course #: 3350**

**Level: CP**

This lab-based course focuses on the application of science through the lens of sustainability to better understand the interrelationship between humans and their impact on the planet. After examining energy in the Earth, the structure and composition of the atmosphere, circulation of the oceans and atmosphere, and climate variations over time, students will learn about sustainable practices that are best suited to help promote and maintain a better ecological balance. Students will conduct research, analyze case studies, participate in several hands-on labs, and develop a problem-solving project using the scientific method. **Credits: 4**

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### **Spanish I**

**Course #: 6301, 6300**

**Level: ACP, CP**

Spanish I begins a two-year introduction to the Spanish language and culture with an emphasis on building a foundation in the language. Students will practice reading, writing, listening, and speaking in Spanish. Students will learn a variety of vocabulary words across many topics, basic grammar concepts such as present-tense verbs, forming sentences, and the use of gender in the language. Projects completed will be creative menus, written reports, and oral presentations. **Please note that this elective is an intensive, hybrid semester offering and will combine 45 blocks of direct classroom instruction with 45 online Spanish-learning modules through our e-textbook. Students opting to take this course will be required to complete online assignments during both their Academic and CTE cycles.** This is a semester class. NOTE: This class will not be offered to Juniors in the 2021-22 school year and beyond. *Credits: 4*

### **Law and the Workplace**

**Course #: 4350**

**Level: CP**

This elective course is designed to introduce students to the legal system, focusing on landmark American trials, key constitutional cases, and current legal issues related to business, employment, and the workplace. Additional topics include computer law, financial crimes, contracts and business organization. The course design and approach are to learn law in a practical, relevant, and experiential way through a case-study approach. The class blends legal content with hands-on learning that allows for students to read critically, to discuss interpretations of law and to debate with the goal of helping students understand their rights and responsibilities under the laws so they can function as responsible citizens in their professional and personal lives. This course is a semester class. *Credits: 2*

### **Business and Entrepreneurship**

**Course #: 7321**

**Level: CP**

This elective course is focused on the foundational skills necessary for students to be successful career pathway. Many students will secure coop placements with local companies in a field they wish to pursue beyond high school. In-school co-op placements are also arranged, and juniors remaining in the building have the chance to work on contracted work such as setting up social media accounts and performing bookkeeping for local businesses. Students can also pursue advanced certifications to further their employment opportunities or take the next steps to launch a product they have developed in their CTE area. This is a semester class. *Credits: 2*



### **Introduction to Computer Science**

**Course #: 2341**

**Level: CP**

This full year math elective will introduce students to the basics of computer programming. Students will learn using Python, a relatively new and widely used programming language both in industry and academia. The concepts learned with Python are easily transferable to other popular languages such as C++ and Java. Students will use the concepts they learn to create their own programs to solve complex problems or increase the speed and efficiency of tasks performed on a computer. Topics to be covered will include basics of programming, conditional statements, loops, vectors, strings, cells, and a cursory overview of object oriented programming. The class will be largely project based, where students are given a problem or task that they need to create a program to solve. ***Credits: 4***

### **Sustainability Science**

**Course #: 3350**

**Level: CP**

This full year lab-based course focuses on the application of science through the lens of sustainability to better understand the interrelationship between humans and their impact on the planet. After examining energy in the Earth, the structure and composition of the atmosphere, circulation of the oceans and atmosphere, and climate variations over time, students will learn about sustainable practices that are best suited to help promote a better ecological balance. Students will conduct research, analyze case studies, participate in several hands-on labs, and develop a problem-solving project using the scientific method. ***Credits: 4***

*Discontinued SY 20-21*

- Forensic Science GRADE 11 (CP)