

# Senior Course Descriptions for Class of 2021

**Senior English-** Students will be automatically placed in the same level as English 11. Any level change must be approved by the Department Head

<b>AP English Literature and Composition</b>	This course focuses on independent and challenging reading aligned with consistent writing assignments. It includes the close reading of selected works of fiction, drama, and poetry from the 16th to the 21st century; the development of critical thinking skills; formal and informal writing; and AP practice exercises, with the goal of success on the AP Examination in May. Because a high score on this examination may earn college credit, the course may be considered equivalent to college freshman English and is considered to be rigorous.
<b>Honors Senior English</b>	Honors English has a curriculum similar to Senior CP English but requires students to discuss and analyze literature in more depth and with a more rigorous pace. Students will work more independently and participate in student-driven class discussion. Students will also be expected to write with more focus and attention to the requirements of MLA format and standard research requirements. Students will be required to read additional selections from the supplementary book list.
<b>CP Senior English</b>	College Prep courses are designed to give students knowledge of great European writers with a focus on British Literature. Students will study great European writers and their lives and work, the complexities and evolution of the English language and the historical and cultural influences on literature. Students will analyze and interpret a variety of literature representing many genres and time periods across Europe. Students will demonstrate an understanding of these works through various styles of writing, including expository, argumentative, and narrative essays. Students will follow MLA guidelines in conducting both mini and sustained research assignments. They are also responsible for reading and testing on one self-selected novel in the first, second, and third quarters for the Accelerated Reader program. A notebook is required.

## Math

<b>AP Statistics</b>	This course is recommended for students planning to attend a four year college. Advanced Placement Statistics will introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. This is an Advanced Placement course which follows a set syllabus approved by The College Board. An AP test is required taken at the end of the year. This will determine whether the student will receive college credit for this course. Students enrolled in AP Statistics should expect to complete lessons and assignments during both academic and shop cycles. Permission of the department head is mandatory.
<b>CP Statistics</b>	This college prep course is offered to students who have passed Algebra II. The course will introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. This course is recommended for students who plan to attend a 2 or 4 year college - particularly those interested in the areas of psychology, sociology, health science and business related majors such as Accounting, Finance, Marketing, etc.
<b>Honors Differential Calculus</b>	This honors course is offered to students who have successfully completed Pre-Calculus or three years of Honors math courses. A strong mathematical background is required. Topics for discussion include functions, limits, infinity and continuity, derivatives, techniques of differentiation, curve sketching, and applications of differentiation. This course is recommended for students who are interested in pursuing a STEM (Science, Technology, Engineering, and Mathematics) based major in college. Permission of the department head is mandatory.
<b>CP Pre-Calculus</b>	This course is offered to students who have completed three years of College Prep - Independent Math courses with a grade of 80 or better and have demonstrated superior mathematical skills. This course is recommended for students who are interested in pursuing a STEM (Science, Technology, Engineering and Mathematics) based major in college. Permission of the department head is mandatory.
<b>CP Trigonometry</b>	This college prep course is offered to those students who have passed all college prep math courses and successfully passed Algebra II CP with a grade of 80 or better. It is recommended for those who are interested in attending college and plan to enter fields such as: architecture, electronics, electrical, engineering, data processing, medical, and drafting. Topics include: trigonometric functions, solving right angles, radian measure, trigonometric identities, and graphing trigonometric functions. Permission of the department head is mandatory.
<b>CP College Math IV/ Algebra III</b>	This CP-Supported course is intended to accelerate student learning in Algebra where curricular gaps may exist. The course will also include an SAT/Accuplacer Prep component. In addition, the course will consist of a number of project-based learning consumer math activities (data analysis, financial literacy) in order to relate Algebra to real world applications. Successful completion of Algebra II is a prerequisite.
<b>CP Algebra II</b>	Any student who has not passed Algebra 2 will automatically be assigned to Algebra 2 for senior year. Students who have not passed Algebra 2 will not be eligible to take other math electives.
<b>Virtual High School Course</b>	See List Below

## Science

<b>Honors Physics Lab</b>	This is the next college preparatory course in the science honors program designed to challenge outstanding science students who wish to prepare themselves for college. A strong background in Algebra is required. The course will be a math intensive introduction to the study of motion, electricity, magnetism, fluid dynamics, sound, light and quantum physics. The prerequisite for this course is a 70 or higher in Honors Chemistry and Honors Algebra II, or department head approval.
<b>Honors Biotechnology Lab</b>	Honors Biotechnology is a laboratory based course in which students will acquire a basic understanding of the study of biotechnology. The major topics will include an in-depth study of DNA as a diagnostic tool, forensic science, genetic engineering, cloning, and ethical conduct in biotechnology. The zebrafish <i>Danio rerio</i> will be used as a model organism to investigate the influence of the environment on gene expression. The course will delve into synthetic biology which is the engineering of cells in order to produce a useful product such as a drug. The course will also emphasize the basic laboratory skills needed in modern biotechnology laboratories. The prerequisites for this course is a 70 or higher in Honors Chemistry or department head approval.
<b>CP Physics Lab</b>	This challenging college preparatory course is designed to prepare students to be successful in college. A strong background in Algebra is required. The prerequisites for this course are grades of 70 or better in Chemistry and Algebra II, or department head approval.
<b>CP Biotechnology Lab</b>	Biotechnology is a laboratory based course in which students will acquire a basic understanding of the study of biotechnology. The major topics will include the study of DNA as a diagnostic tool, forensic science, genetic engineering, cloning, and ethical conduct in biotechnology. The course will also emphasize the basic laboratory skills needed in modern biotechnology laboratories. The prerequisite for this course is a 70 or higher in chemistry or department head approval.
<b>CP Human Body Systems</b>	In this course, students will be introduced to the anatomy (structures) and physiology (functions) of the major human body systems. Students will gain knowledge of the functioning of the human body through a variety of laboratory exercises and they will study comparative anatomy by dissection of both invertebrate and vertebrate animals. Additionally, pathology of the human body will be discussed, along with prevention strategies.
<b>CP Applied Science</b>	This is a college preparatory course designed to introduce students to electronics and microprocessors by applying concepts of physics and chemistry. Students will learn to write basic code that allows Arduino based microprocessors to perform a large array of functions. In this project based course students will design and build systems to investigate concepts such as electricity, motion, energy, waves and chemical reactions. These projects are designed to promote and develop appropriate skills in science inquiry, engineering and coding. Students will conclude the year with a capstone project that will allow students to demonstrate command of their newly learned skills.
<b>CP Horticulture</b>	This course is designed to introduce students to the care and management of plants. Students will explore topics that include plant identification, plant parts and functions, garden design and maintenance, greenhouse management, plant propagation and garden care. Students will participate in hands-on projects that include the greenhouse, school grounds, nature trails and school gardens.
<b>CP Environmental Science Lab</b>	This college preparatory course will further develop students' understanding of environmental issues pertaining to ecological interactions and ecosystem structure. Prerequisites for this course are grades of 70 or higher in chemistry or physical science.
<b>CP Chemistry Lab</b> *** Only if student did not pass in summer school	This challenging college preparatory course is designed to aid students in further developing the skills they will need to be successful in college. An understanding of Algebra is necessary to be successful in this course. The prerequisite for this course is an 80 or higher in Biology (Lab) and a 70 or higher in Geometry.

## Senior Related Course -Mandatory as Determined by the Student's CVTE Shop



## Elective Courses

<b>AP European History</b>	This is a vigorous blended course, which requires participation in the Moodle platform, online discussions and the completion of various shop assignments. <b>All students are required to sit for the AP exam.</b> This course is recommended to students who have successfully completed Honors World History I or have been recommended for placement by their teachers.
<b>Honors World History II</b>	This course, which mirrors the content provided in College Prep World History II, <i>emphasizes writing, analysis of primary and secondary sources, and articulate discussions of challenging materials, within a blended classroom setting.</i> <b>Students will demonstrate and master their skills through a capstone and/or extensive research-based class projects.</b> This course is offered to students who have demonstrated advanced skills in reading and writing. This course is offered to students who have successfully completed Honors World History I or have been recommended for placement by their teachers.
<b>CP World History II</b>	Students study the rise of the nation state in Europe, the French Revolution, and the economic and political roots of the modern world. They will study the origins and the consequences of the Industrial Revolution, 19 <sup>th</sup> century political reforms in Europe, and imperialism in Africa, Asia, and South America. They will examine the causes and consequences of the great military and economic events of the past century, including World War I, the Great Depression, World War II, the Cold War, and the Russian and Chinese revolutions. Students will also study the rise of nationalism and the continuing political, ethnic, and religious conflicts in many parts of the world.

<b>Additional Math Course</b>	See Math list above or Virtual High School List below
<b>Additional Related Course</b>	The senior related elective course will build upon career and technical knowledge and add to occupational licensure hours. This elective course will allow students who are intending to enter the workforce upon graduation to enhance their technical skills in all Career and Technical areas including but not limited to: Trade specific code knowledge, Engineering skills, Microsoft Office Certifications, NATEF Certification, 1st Class Fireman's Certification, Medication Administration Program, and Troubleshooting oil & gas heating systems.
<b>Additional Science Course</b>	See list above or Virtual High School List
<b>Virtual High School Course</b>	See list options (including Foreign Language) <ul style="list-style-type: none"> <li>Once students are enrolled in a full-year VHS course they will not be allowed to drop the course</li> </ul>

## Trimester Courses ( 1 Credit) - Mandatory for Every Senior

<b>Senior Physical Education</b>	The twelfth grade physical education course allows students to choose activities that meet their skill level and interest while promoting lifelong fitness. Curriculum is focused on gameplay in which students incorporate skills learned during freshmen and sophomore year.	✓
<b>Research &amp; Writing</b>	This mandatory trimester course will focus on college and career research and writing skills.	✓

## Trimester Elective Courses (1 Credit)

<b>CP Local History</b>	Students study the history of Old Dartmouth, which became New Bedford, Dartmouth, Fairhaven, Acushnet, and Westport. Students will learn about the importance of the whaling industry and major figures in the anti-slavery movement. This course includes a field trip that highlights the interesting local history students will be uncovering.
<b>CP Psychology</b>	General Psychology introduces students to the seminal theories of modern psychology and traces the evolution of psychology to its acceptance as an empirical science. In addition, it provides a comprehensive overview of human development and the effects of environment and heredity on individuals. The anatomy and function of the brain, human behavior, personality, perception and various modes of learning are topics which are emphasized in this course. Students considering professions in education, nursing and law enforcement may find this course particularly useful.
<b>CP Economics &amp; Finance</b>	This course covers topics related to economic concepts, personal finance and the operation of a small business. Small business topics include sole proprietorships, partnerships, corporations, workman's compensation, social security, taxes, permits, licenses, insurance, and retirement systems. Topics in economics will include supply and demand market structures the role of government, the national economy financial institutions and trade. Students will also be introduced to important personal finance. Students considering owning a small business or a career in business or finance may find this course particularly useful.
<b>CP Sociology</b>	The ultimate goal of the course is to help students acquire a broad and deep understanding of social forces that influence the world in which we live. Students considering a profession in criminal justice, social work education and healthcare may find this course particularly useful.

**Virtual High School Courses** VHS is a non-profit organization committed to expanding educational opportunities for students and teachers. VHS offers a variety of middle and high school courses that are accredited by the Middle States Commission on Secondary Schools and the Northwest Accreditation Commission. VHS students take part in a global online classroom with classmates from different backgrounds and diverse perspectives. Students use web tools to gather and share resources and ideas, participate in discussions, work on assignments, and collaborate on projects with their online classmates and teacher. **Other courses may be available- consult Mr. Angelo, Curriculum Coordinator**

<b>AP® Biology</b>	The Advanced Placement course in Biology is equivalent to a full-year Freshman Biology course taught at any major University. Students will be reading the same text that is used at many major colleges and universities, and working at a rigorous pace to cover the material and prepare for the Advanced Placement Examination in May. Upon successful completion of the exam, students may receive college credit and will be well-prepared for any future Biology course. This class will build upon prior knowledge of Biology. The course covers topics such as molecular genetics, biochemistry, human anatomy and physiology, cell biology, plant biology and ecology. Using the text, the Internet, class discussions, and projects, the course will cover a tremendous amount of material in order to give students a complete understanding of the study of biology. Biweekly examinations will test students' knowledge of the material as well as prepare them for the AP® examination. Due to the volume and level of the material, this course is designed to challenge extremely motivated students who have a strong interest in the Biological Sciences.
<b>AP® Calculus AB</b>	The Advanced Placement Calculus AB course is equivalent to the Calculus I college-level course. The rigor and pace of this course is consistent with calculus offerings at many colleges and universities and will prepare students for the Advanced Placement Exam. Upon successful completion of the exam, students may receive college credit and will be well-prepared for additional advanced mathematics coursework. AP® Calculus AB builds upon prior knowledge in previous mathematics course work. Students will explore topics within the three big ideas covered in the course: (1) limits, (2) derivatives, and (3) integrals. This course allows students to gain conceptual understanding through discussions, group activities and investigations. Students will learn how to use the graphing calculator to help solve problems, experiment, interpret results, and support conclusions. In order to prepare for the exam, students will complete weekly AP® practice quizzes and unit exams that will conform to the constraints of the AP® exam.
<b>AP® Chemistry</b>	This Advanced Placement Chemistry Course is equivalent to a full-year Introductory Chemistry college-level course. The rigor and pace of this course is consistent with that of many major colleges and universities, and will prepare students for the Advanced Placement Examination in May. Upon successful completion of the exam, students may receive college credit and will be well-prepared for additional advanced chemistry coursework. AP® Chemistry builds upon prior knowledge of Chemistry. Students will investigate topics such as chemical reactions, stoichiometry, atomic theory, periodicity, bonding, states of matter, thermodynamics, kinetics and equilibrium. This course incorporates a variety of textbook and multimedia resources and will require students to perform hands on and virtual experiments to develop a deeper understanding of chemistry. Students will engage in collaborative activities such as class discussions, contribute to class data and attend regular “lab meetings” throughout the course. AP practice quizzes and unit exams will help prepare students for the AP examination. Due to the rigor and pace of the content, this course is designed to challenge extremely motivated students who have a strong interest in Chemistry.
<b>CP Latin 1</b>	There are two primary goals of Latin 1. On the one hand, Latin 1 focuses on pronunciation, vocabulary acquisition, and the grammar of the simple Latin sentence, so that the successful student will gain a rudimentary ability to comprehend Latin. On the other hand, Latin 1 enables the successful student to better understand and use English or other languages. A secondary goal is to introduce the student to Roman history and culture, which so heavily influence our own.
<b>CP Portuguese I</b>	The primary goal of this course is to engage students in getting acquainted with the Portuguese language and culture and, therefore, to develop the abilities to communicate and to think in Portuguese. The practice with the Portuguese language will mainly involve skills of listening and speaking, but also reading and writing. Introductory knowledge of the Portuguese people, language and culture will certainly be a focal point in this course. The class will also explore Portuguese language and cultural influence throughout the world, while instilling attitudes such as those of curiosity and respect for the convictions of others.
<b>CP Spanish 1</b>	Spanish 1 is an introductory course focusing on the core skills of listening, speaking, reading and writing. Guided by the standards of the American Council on the Teaching of Foreign Languages (ACTFL), students will not only learn to communicate in Spanish but also gain an insight into the cultural aspects of Spain and other Spanish-speaking countries. Using multimedia tools, students will participate in discussions, complete written activities, record and listen to Spanish audio files, engage in collaborative projects, and explore history, architecture, the arts, literature and foods of the Spanish-speaking world.
<b>CP Spanish 2</b>	Spanish 2 is a continuation of Spanish 1. Semester 1 begins with a review of Spanish 1 skills. As they progress, students will continue to learn new listening, speaking, reading and writing skills adding to their knowledge of Spanish vocabulary. Students will also continue to explore and deepen their appreciation of the culture of Spain and other Spanish-speaking countries. Students will participate in discussions, complete written activities, record and listen to Spanish audio files, and engage in collaborative projects.

## Graduation Requirements for the Class of 2021

1. Must accumulate a minimum of 125 credits over four years.
2. Must satisfy the school's attendance requirement of no more than 4 unexcused absences per trimester.
3. Must not fail more than 6 credits during their senior year.
4. Must pass their career and vocational technical education program- 18 Credits per year (72 total credits over four years).
5. Must pass 14 credits, including four-credits in English courses during the senior year of high school.
6. Must pass a minimum of 10 credits of Math instruction over four years, including a passing grade in Algebra I and Geometry.
7. Must pass a minimum of 9 credits of Science instruction over four years.
8. Must pass a minimum of 7 credits of Social Studies instruction over four years.
9. Must pass a minimum of 8.5 credits of related instruction over two years in the 11<sup>th</sup> and 12<sup>th</sup> grade.
10. Must pass a minimum of 3.0 credits of strategies/literacy trimester courses from Freshman & Sophomore years.
11. Must pass a minimum of 1.5 credits in physical education/health classes over four years or the completion of course credits as assigned by the Principal.
12. Must receive a passing score on their Career Portfolio.
13. Must receive a passing score on their Career Cruising assignments.