

ADVANCED PLACEMENT PROGRAM

Haverhill High School offers a rich program of Advanced Placement courses designed for students who wish to pursue college credit while in high school. There are specific prerequisites for Advanced Placement courses which can be found within each course description. *All students who are accepted into the program must take the College Entrance Examination Board Advanced Placement Test in the course area for which they are registered. If an AP student does not take the AP exam, he or she will receive the quality points awarded for honors credit rather than AP credit, and class rank will be recalculated. These tests are administered at the high school in May.*

CRS NO	COURSE	AREA
H0023	English Language & Composition	Humanities
H0031	English Literature & Composition	Humanities
H1110	European History	Humanities
H1115	United States History	Humanities
H1200	US Government and Politics	Humanities
H2234	Calculus AB	Mathematics
H2235	Calculus BC	Mathematics
H2238	Statistics	Mathematics
H2246	JAVA Programming, A	Mathematics
H3317	Biology	Science
H3324	Chemistry	Science
H3328	Physics	Science
H4434	German Language	World Languages
H5526	Art History	Fine Arts
H6627	Economics	School to Career/Business
H4761	Spanish Language	World Languages

AP ENGLISH LANGUAGE & COMPOSITION CRS H0023 GRADE 12 CR 1 Y

Advanced Placement English Language and Composition engages students in becoming skilled readers of prose written in a variety of periods, disciplines and rhetorical contexts, and in becoming skilled writers who compose for a variety of purposes. Students will experience generating ideas, then developing, revising, and editing them in successive drafts. AP Language and Composition students become a community of learners who contribute in meaningful ways to the daily discourse of the classroom. Their writing, reading, and speaking should make students aware of the interactions between a writer's purposes and audience expectations, as well as how the resources of language contribute to effectiveness in writing. Heavy emphasis will be on nonfiction writing and reading. Students enrolling in this course are required to take the advanced placement examination in language and composition and develop and reflect on their work to create an exit portfolio. *Prerequisite: grade of B+ or better in 11th grade honors, application and qualifying essay, plus the recommendation of two English teachers.*

AP ENGLISH LITERATURE & COMPOSITION CRS H0031 GRADE 11 CR 1 Y

Advanced Placement Literature and Composition course engages juniors in the careful reading and critical analysis of imaginative literature. Through the close reading of selected texts, students deepen their understanding of the ways writers use language to provide both meaning and pleasure for their readers. As they read, students consider a work's structure, style, and themes as well as such smaller-scale elements as the use of figurative language, imagery, symbolism, and tone. The course includes intensive study of representative works from various genres and periods, concentrating on works of recognized literary merit. Close reading of literature involves the experience of literature, the interpretation of literature, and the evaluation of literature. Each corresponds to an approach to writing about literary works. Writing to understand a literary work may involve writing response and reaction papers, along with annotation, free writing, and keeping a reading journal and portfolio. Students enrolling in this course are required to take the Advanced Placement Examination in Literature and Composition *Prerequisite: Grade of B+ or better in 10th grade English, application and qualifying essay, and the recommendation of two teachers.*

EUROPEAN HISTORY ADV PLACEMENT CRS H1110 GRADE 10 CR 1 Y

The Advanced Placement Program in European History is designed to provide students with the intellectual-cultural, political-diplomatic, and social-economic history of Europe beginning about 1450. The program prepares students for intermediate and advanced college courses by making demands upon them equivalent to those of full-year introductory college courses. Students should learn to assess historic materials, to weigh the evidence and interpretations presented, and to present reasons and evidence clearly and persuasively in essay format. Students selecting AP European History must take the Advanced Placement Examination in European History, for which college credit may be awarded. *Prerequisite: Grade of B or better in World History Honors and recommendation of teacher.*

US HISTORY ADVANCED PLACEMENT CRS H1115 GRADE 11 CR 1 Y

The Advanced Placement Program in United States History is designed to provide students with the analytic skills and factual knowledge necessary to deal critically with the problems and materials in American History. The program prepares students for intermediate and advanced college courses by making demands upon them equivalent to those of full-year introductory college course. Students should learn to assess historic materials, to weigh the evidence and interpretations presented, and to present reasons and evidence clearly and persuasively in essay format. The course is designed to lead to the AP exam. All students must take this exam for which college credit may be awarded. Students for this Junior year offering will be selected from among the top students in United States History 1. *Prerequisite: Grade of B or better in US History 1 and recommendation of teacher.*

AP U.S. GOVERNMENT AND POLITICS CRS H1200 GR 12 CR 1 Y

Advanced Placement U.S. Government and Politics is designed to give students a critical perspective on politics and government in the United States. This course is an in-depth study of general concepts used to interpret American politics combined with the analysis of specific case studies. It also requires familiarity with the various institutions, groups, beliefs, and ideas that make up the American political reality. Topics will include: the U.S. Constitution, the three branches of government, impact of mass media, impact of special interest groups, the election process, the impact of polling, civil rights cases and the law-making process. *Prerequisite: Successful completion of, or concurrent registration in the core Social Studies curriculum with a "B" or better.*

CALCULUS ADVANCED PLACEMENT AB CRS H2234 GRADE 12 CR 1 Y

This course is an introduction to the fundamentals of differential and integral calculus for students planning to take advanced mathematics courses in college. Topics covered include limits, continuity, derivatives, integrals, and their applications as well as all other topics in the College Board's topical guide provided for Calculus AB. Calculus AB is the equivalent of one semester of college calculus with supplementary material designed to strengthen the student's background in advanced algebra and trigonometry. Students in this course are required to take the Calculus AB Advanced Placement exam. *Prerequisite: Grade of B or better in Pre-Calculus Honors Accelerated or A in Pre-Calculus Honors, and recommendation of mathematics teacher.*

CALCULUS ADVANCED PLACEMENT BC CRS H2235 GRADE 12 CR 1 Y

This course is an introduction to the fundamentals of differential and integral calculus for students planning to take advanced mathematics courses in college. Topics covered include limits, continuity, derivatives, integrals and their applications as well as all other topics in the College Board's guide for BC Calculus. Calculus BC is the equivalent of two semesters of college calculus. Students in this course are required to take the Advanced Placement exam for Calculus AB or Calculus BC, based on the teacher's recommendation. *Prerequisite: Grade of B+ or better in Pre-Calculus Honors Accelerated or A+ in Pre-Calculus Honors and recommendation of mathematics teacher.*

STATISTICS ADVANCED PLACEMENT CRS H2238 GRADE 12 CR1 Y

This course is equivalent to a college statistics course and covers all the topics in the College Board guide for AP Statistics. Students will be introduced to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad conceptual themes: describing patterns and departures from patterns, planning and conducting a study, exploring random phenomena using probability, and estimating population parameters and testing hypotheses. Students in this course are required to take the Advanced Placement exam for Statistics. *Prerequisite: Grade of C or better in Pre-Calculus Honors or Honors Accelerated, or a grade of B or better in Algebra 2 Honors if this course is taken concurrently with Pre-Calculus or Senior Math 1 and Senior Math 2; and with the recommendation of the previous mathematics teacher.*

JAVA PROGRAMMING AP—A CRS H2246 GRADES 11-12 CR1 Y

This is an advanced computer-science programming course with emphasis on mathematical applications using object oriented programming methodology with concentration in algorithms, data structures, design, and logic. Applications and case studies are used to develop student awareness of the need for particular algorithms and appropriate data structures. This course will follow an established syllabus approved by the College Board for AP Java A. Students in this course are required to take the Advanced Placement exam for Java AP--A. *Prerequisites: Passing grades in Intro to Intro Programming Languages or Web Site Design or Multi-media, and a B or better in Algebra II, and/or approval of the teacher.*

BIOLOGY ADVANCED PLACEMENT CRS H3317 GRADES 11-12 CR 1 Y

Advanced Placement Biology is designed to be the equivalent of a college introductory course usually taken by science majors during their first year. It provides students with the conceptual framework, factual knowledge and analytical skills necessary to deal critically with the dynamics of biological science in today's world. The three general topics are: Molecules and Cells; Heredity and Evolution; Organisms and Populations. Dissection has been a part of this course in past years. Alternatives to dissection are available for any student who objects to dissection and whose parent or guardian sends a written request to the school. Students take the national AP Biology examination in May. *Prerequisite: Minimum grade of 85 in CP Biology or 80 in Honors Biology, 80 in either CP or Honors Chemistry. Recommended: Previous or concurrent enrollment in CP or Honors Physics*

CHEMISTRY ADVANCED PLACEMENT CRS H3324 GRADES 11-12 CR 1 Y

Advanced Placement Chemistry is designed to meet the objectives of a general chemistry course at the college level. This offering should contribute to the development of the student's ability to think clearly and to express ideas orally and in writing with clarity and logic. The course includes the study of chemical principles, chemical equilibrium, thermodynamics, atomic and molecular structure, and aqueous solution chemistry. Students who select AP Chemistry must take the Advanced Placement Examination in Chemistry. *Minimum grade of B- in Honors Chemistry (or A- in Chemistry CP), B in Algebra 2, and recommendation of science teacher*

PHYSICS ADVANCED PLACEMENT LEVEL B CRS H3328 GRADES 11-12 CR1 Y

This is an algebra-based physics course intended to be representative of courses commonly offered in American colleges and universities. Its aim is to give the student an in-depth understanding of Physics including mechanics, fluids, thermodynamics, vibrations and wave phenomena, optics, electromagnetism, and quantum mechanics. At the end of this course each student is expected to take the AP Physics B exam. *Prerequisites: Minimum grade of B- in Honors Physics or A- in Physics CP and teacher recommendation*

GERMAN LANGUAGE AP**CRS H4434****GRADE 12****CR 1****Y**

The AP German course is intended to be equivalent both in content and in difficulty to an advanced-level college German language course. This course emphasizes the use of language for active communication and develops a strong command of vocabulary and structure. Students will practice speaking German in various conversational situations and will read newspaper and magazine articles, contemporary fiction and non-technical writings, and will learn how to express themselves fluently and accurately both orally and in writing. This course will be taught in German. *Prerequisite: Grade of B or better in German 4 and recommendation of German teacher.*

ADVANCED PLACEMENT ART HISTORY**CRS H5526****GRADES 10-12 CR 1****Y**

The Advanced Placement Program in Art History is designed as a survey of Western Art from prehistory to contemporary with some derivation into images and ideas outside the Western tradition. The students should learn to assess, critique, and interpret historic information through the role of the artists and their work in history. This program prepares students for intermediate and advanced college courses by making demands upon them equivalent to those of full-year introductory college courses. Students selecting AP Art History must take the Advanced Placement Examination in Art History, for which college credit may be awarded. *Open to all students in grades 10,11, and 12.*

ECONOMICS ADVANCED PLACEMENT**CRS H6627****GRADE 11, 12 CR 1****Y**

This course will focus on an in-depth understanding of microeconomics. Students will study the concepts in opportunity cost, trade-offs, production possibility curve, and other analytical examples. The course will consider how different types of economies determine which goods and services to produce, how to produce them, and to whom to distribute them. Other basic concepts that are explored include the functions performed by an economic system and the way the tools of supply and demand can be used to analyze a market economy. Students who select AP Economics must take the AP tests in Microeconomic. *Prerequisite: Grade of B or better in Algebra I CP and in grade 10 English CP.*

SPANISH ADVANCED PLACEMENT**CRS H4761****GRADE 12****CR 1****Y**

Advanced Placement Spanish follows the prescribed curriculum for the Spanish Language Advanced Placement Examination. The course is conducted in Spanish and the student is expected to respond and converse on various topics in Spanish. Students who select AP Spanish must take the Advanced Placement Examination in Spanish Language. *Prerequisite: Grade of B or better in Spanish 4 or previous year's language class and recommendation of teacher. PROGRAM OFFERED IN COOPERATION WITH SEI DEPARTMENT.*