

# Advanced Placement

## Course Descriptions and Prerequisites

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### AP Physics

**Grades Available:** 12th

**Credit Type:** Core or Elective

**Prerequisites:** Geometry, Algebra I, & Algebra II (*recommended*)

**Honors Available:** No

AP Physics is an algebra-based, introductory college-level physics course and it is only available through live instruction online. Students will cultivate their understanding of physics through classroom study, in-class activity, and hands-on, inquiry-based laboratory work as they explore concepts like systems, fields, force interactions, change, conservation, and waves. Laboratory experience will be part of the education of AP Physics. Colleges will require students to present their laboratory materials from AP science courses before granting college credit for laboratory, so students are encouraged to retain their laboratory notebooks, reports, and other materials.

### AP Biology

**Grades Available:** 11th or 12th

**Credit Type:** Core or Elective

**Prerequisites:** Biology (*recommended*), Algebra I

**Honors Available:** No

This course is taught at the college level and designed to prepare students to take the Advanced Placement Examination and score high enough to earn college credit in those colleges that recognize the examination. College level textbooks are used. The course will cover all of the topics in the AP Biology Course Description. These include biochemistry, cell structure and function, cell energetics, cellular reproduction and communication, heredity, molecular genetics, evolution, ecology, diversity of organisms, structure and function of plants and animals, and comparative anatomy.

### AP Chemistry

**Grades Available:** 11th or 12th

**Type:** Core or Elective

**Prerequisites:** Chemistry (*recommended*)

**Honors Available:** No

This course is taught at the college level and is designed to prepare students to take the Advanced Placement Examination and to score high enough to earn college credit in those colleges that recognize the examination. College level textbooks are used. The course will cover all of the topics in the AP Chemistry Course Description. These include an introduction to chemistry as the study of change, gases, thermochemistry, quantum theory, chemical bonding, crystals, phase changes, solutions, chemical kinetics, chemical equilibrium, acids and bases, entropy, electrochemistry, nuclear chemistry, metallurgy, alkali and alkaline metals, nonmetallic metals, transition metals, organic chemistry, and synthetic and natural organic polymers.

## AP Calculus AB & BC

**Grades Available:** 11th or 12th

**Type:** Core or Elective

**Prerequisites:** Algebra I, Geometry, Algebra II

**Honors Available:** No

This AP Calculus course is designed with the intent for students to incorporate the concepts of all previous math courses and expand upon these concepts with the implementation of Limits. Emphasis is placed upon the multi-representational approach to calculus where problems and their solutions are explored and interpreted graphically, numerically, analytically and verbally. Students will also be required to explain their answers in written form and will be asked to compare their written response to the AP grading rubric and explain why they feel they should receive that grade. Students are required to use graphing calculators with the capabilities ascribed by the College Board: ([apcentral.collegeboard.com](http://apcentral.collegeboard.com)). These calculators will be used in a variety of ways including multi-representation of equations (graphs and tables) and also for conducting explorations with various functions and how different values change the look of the function.

## AP U.S. History

**Grades Available:** 11th or 12th

**Type:** Core or Elective

**Prerequisites:** None

**Honors Available:** No

AP United States History is an intensive full year course divided into two semesters. The course focuses on exploring and analyzing American historical events, individuals and cultural trends. You will be prepared with the analytic skills and factual knowledge necessary to deal critically with the problems and materials in United States History. This first semester course covers the time frame of 1492 to 1877, and the second semester course covers the time frame 1878 to present. This course is designed to prepare students for the Advanced Placement exam in United States History that is administered by the College Board Educational testing center. The class satisfies the United States History requirement for graduation

## AP English Language and Composition

**Grades Available:** 12th

**Type:** Core or Elective

**Prerequisites:** English 9, English 10, English 11

**Honors Available:** No

This course helps students prepare to take the Advanced Placement Language and Composition Exam™ administered by the College Board. The first semester focuses on the concepts and skills needed to analyze argumentative texts and to build solid arguments—starting with the choices that experienced authors make when they write to persuade an audience. Students learn and apply best practices for constructing, revising, and refining their own arguments. Writing assignments in Semester A include rhetorical analyses of straightforward written arguments as well as satirical texts and visual approaches to persuasion. Students will be asked to develop several formal argumentative essays and also to practice new skills by writing less formal journal entries throughout the semester. The pace and level of work required by this course is similar to that required in a college-level composition course, so students should be prepared to work independently and to complete all assignments in a way that makes good use of their time.

The second semester of AP English Language and Composition focuses on writing tasks that require synthesis and documentation. Students will analyze many examples of synthesis essays and apply what they learn as they create their own texts based on multiple sources. They will also take a closer look at the use of visual and multi-modal or multimedia evidence when used as support for an argument, and they'll consider how to incorporate these unique approaches into their own attempts at persuasion.

## AP Spanish

**Grades Available:** 11th & 12th

**Type:** Elective

**Pre-requisites:** Spanish I, Spanish II

**Honors Available:** No

The AP Spanish Language and Culture course is an advanced language course in which students are directly prepared for the AP Spanish Language and Culture test. It uses as its foundation the three modes of communication: interpersonal, interpretive and presentational. The course is conducted almost exclusively in Spanish. The course is based on the six themes required by the College Board: (1) global challenges, (2) science and technology, (3) contemporary life, (4) personal and public identities, (5) families and communities, and (6) beauty and aesthetics. The course teaches language structures in context and focuses on the development of fluency to convey meaning. Students explore culture in both contemporary and historical contexts to develop an awareness and appreciation of cultural products, practices, and perspectives. Students should expect to listen to, read, and understand a wide-variety of authentic Spanish-language materials and sources, demonstrate proficiency in interpersonal, interpretive, and presentational communication using Spanish, gain knowledge and understanding of the cultures of Spanish speaking areas of the world, use Spanish to connect with other disciplines and expand knowledge in a wide-variety of contexts, develop insight into the nature of the Spanish language and its culture, and use Spanish to participate in communities at home and around the world. The AP Spanish Language and Culture course is a college level course. The intensity, quality, and amount of course material can be compared to that of a third-year college course.