



TITUSVILLE HIGH SCHOOL

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TITUSVILLE HIGH SCHOOL

2016-2017

ADVANCED
PLACEMENT PROGRAM

COURSE CATALOG



*OVERVIEWS AND DESCRIPTIONS TAKEN
DIRECTLY FROM AP CENTRAL

AP ELECTIVE COURSES

AP DRAWING

The AP Drawing Course is one of three portfolio courses. The AP Studio Art portfolios are designed for students who are seriously interested in the practical experience of art. Students submit portfolios for evaluation at the end of the school year. AP Studio Art students create a portfolio of work to demonstrate the artistic skills and ideas they have developed, refined, and applied over the course of the year to produce visual compositions.

Targeted Grade Level: 11-12th Grade.

AP ART HISTORY

The AP Art History course is equivalent to a two-semester introductory college course that explores the nature of art, art making, and responses to art. By investigating specific course content of 250 works of art characterized by diverse artistic traditions from prehistory to the present, the course fosters in-depth, holistic understanding of the history of art from a global perspective. Students become active participants in the global art world, engaging with its forms and content.

Targeted Grade Level: 11-12th Grade

AP MUSIC THEORY

The AP Music Theory course corresponds to one or two semesters of a typical introductory college music theory course that covers topics such as musicianship, theory, musical materials, and procedures. Musicianship skills, including dictation and other listening skills, sight singing, and harmony, are considered an important part of the course. Through the course, students develop the ability to recognize, understand, and describe basic materials and processes of tonal music that are heard or presented in a score.

Targeted Grade Level: 11-12th Grade.

AP SPANISH LANGUAGE AND CULTURE

The AP Spanish Language and Culture course emphasizes communication by applying interpersonal, interpretive, and presentational skills in real-life situations. The course engages students in an exploration of culture in both contemporary and historical contexts.

Targeted Grade Level: 12th Grade

AP ENGLISH COURSES

The AP Program offers two courses in English studies, each designed to provide high school students the opportunity to engage with a typical introductory-level college English curriculum. The AP English Language and Composition course focuses on the development and revision of evidence-based analytic and argumentative writing and the rhetorical analysis of nonfiction texts. The AP English Literature and Composition course focuses on reading, analyzing, and writing about imaginative literature (fiction, poetry, drama) from various periods. There is no prescribed sequence of study, and a school may offer one or both courses.

The AP English Language and Composition course aligns to an introductory

AP ENGLISH LANGUAGE

college-level rhetoric and writing curriculum, which requires students to develop evidence-based analytic and argumentative essays that proceed through several stages or drafts. Students evaluate, synthesize, and cite research to support their arguments. Throughout the course, students develop a personal style by making appropriate grammatical choices. Additionally, students read and analyze the rhetorical elements and their effects in non-fiction texts, including graphic images as forms of text, from many disciplines and historical periods.

Targeted Grade Level: 11th Grade.

AP ENGLISH LITERATURE

The AP English Literature and Composition course aligns to an introductory college-level literary analysis course. The course engages students in the close reading and critical analysis of imaginative literature to deepen their understanding of the ways writers use language to provide both meaning and pleasure. As they read, students consider a work's structure, style, and themes, as well as its use of figurative language, imagery, symbolism, and tone. Writing assignments include expository, analytical, and argumentative essays that require students to analyze and interpret literary works.

Targeted Grade Level: 11th Grade.

AP MATH COURSES

AP Calculus AB and AP Calculus BC focus on students' understanding of calculus concepts and provide experience with methods and applications. Although computational competence is an important outcome, the main emphasis is on a multirepresentational approach to calculus, with concepts, results, and problems being expressed graphically, numerically, analytically, and verbally. The connections among these representations are important.

AP CALCULUS AB

AP Calculus AB is roughly equivalent to a first semester college calculus course devoted to topics in differential and integral calculus. The AP course covers topics in these areas, including concepts and skills of limits, derivatives, definite integrals, and the Fundamental Theorem of Calculus. The course teaches students to approach calculus concepts and problems when they are represented graphically, numerically, analytically, and verbally, and to make connections amongst these representations.

Targeted Grade Level: 11-12th Grade

AP CALCULUS BC

AP Calculus BC is roughly equivalent to both first and second semester college calculus courses and extends the content learned in AB to different types of equations and introduces the topic sequences and series. The AP course covers topics in differential and integral calculus, including concepts and skills of limits, derivatives, definite integrals, the Fundamental Theorem of Calculus, and series.

Targeted Grade Level: 12th Grade

AP STATISTICS

The AP Statistics course is equivalent to a one-semester, introductory, non-calculus-based college course in statistics. The course introduces students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. There are four themes in the AP Statistics course, exploring data, sampling and experimentation, anticipating patterns, and statistical inference. Students use technology, investigations, problem solving, and writing as they build conceptual understanding.

Targeted Grade Level: 9-10th Grade

AP CAPSTONE COURSES

AP Capstone™ is an innovative diploma program from the College Board that equips students with the independent research, collaborative teamwork, and communication skills that are increasingly valued by colleges. AP Capstone is built on the foundation of two AP courses — AP Seminar and AP Research — and is designed to complement and enhance the in-depth, discipline-specific study experienced in other AP courses. Students who earn scores of 3 or higher in AP Seminar and AP Research and on four additional AP Exams of their choosing will receive the AP Capstone Diploma. Students who earn scores of 3 or higher in AP Seminar and AP Research but not on four additional AP Exams will receive the AP Seminar and Research Certificate. AP Seminar may also be taken as a stand-alone option.

AP SEMINAR

AP Seminar is a foundational course that engages students in cross-curricular conversations that explore the complexities of academic and real-world topics and issues by analyzing divergent perspectives. Using an inquiry framework, students practice reading and analyzing articles, research studies, and foundational literary and philosophical texts. Students learn to synthesize information from multiple sources, develop their own perspectives in research-based written essays, and design and deliver oral and visual presentations, both individually and as part of a team. Ultimately, the course aims to equip students with the power to analyze and evaluate information with accuracy and precision in order to craft and communicate evidence-based arguments.

Targeted Grade Level: 10-11th Grade

AP RESEARCH

AP Research allows students to deeply explore an academic topic, problem, or issue of individual interest. Through this exploration, students design, plan, and conduct a year-long research based investigation to address a research question. In the AP Research course, students further their skills acquired in the AP Seminar course by understanding research methodology; employing ethical research practices; and accessing, analyzing, and synthesizing information as they address a research question. The course culminates in an academic paper of approximately 4000–5000 words and a presentation with an oral defense.

Targeted Grade Level: 11-12th Grade

AP COMPUTER SCIENCE COURSES

There are two computer science offerings, and students can take either course in any order. The AP Computer Science A course and exam continues to focus on computing skills related to programming in Java. The new AP Computer Science Principles course will complement AP Computer Science A as it aims to broaden participation in the study of computer science. The courses underscore the importance of communicating solutions appropriately and in ways that are relevant to current societal needs.

AP COMPUTER SCIENCE PRINCIPLES

The AP Computer Science Principles course is designed to be equivalent to a first-semester introductory college computing course. In this course, students will develop computational thinking vital for success across all disciplines, such as using computational tools to analyze and study data and working with large data sets to analyze, visualize, and draw conclusions from trends. The course is unique in its focus on fostering student creativity. Students are encouraged to apply creative processes when developing computational artifacts and to think creatively while using computer software and other technology to explore questions that interest them. They will also develop effective communication and collaboration skills, working individually and collaboratively to solve problems, and discussing and writing about the importance of these problems and their impacts to their community, society, and the world.

Targeted Grade Level: 9-10th Grade.

AP COMPUTER SCIENCE A

AP Computer Science A is equivalent to a first-semester, college-level course in computer science. The course introduces students to computer science with fundamental topics that include problem solving, design strategies and methodologies, organization of data, approaches to processing data, analysis of potential solutions, and the ethical and social implications of computing. The course emphasizes both object-oriented and imperative problem solving and design using Java language. These techniques represent proven approaches for developing solutions that can scale up from small, simple problems to large, complex problems. The AP Computer Science A course curriculum is compatible with many CS1 courses in colleges and universities.

Targeted Grade Level: 11-12th Grade.

AP SCIENCE COURSES

AP BIOLOGY

AP Biology is an introductory college-level biology course. Students cultivate their understanding of biology through inquiry-based investigations as they explore the following topics: evolution, cellular processes — energy and communication, genetics, information transfer, ecology, and interactions.

Targeted Grade Level: 10th Grade

AP CHEMISTRY

The AP Chemistry course provides students with a college-level foundation to support future advanced course work in chemistry. Students cultivate their understanding of chemistry through inquiry-based investigations, as they explore topics such as: atomic structure, intermolecular forces and bonding, chemical reactions, kinetics, thermodynamics, and equilibrium

Targeted Grade Level: 11th Grade

AP PHYSICS

AP Physics 1 is an algebra-based, introductory college-level physics course. Students cultivate their understanding of Physics through inquiry-based investigations as they explore topics such as Newtonian mechanics (including rotational motion); work, energy, and power; mechanical waves and sound; and introductory, simple circuits.

Targeted Grade Level: 12th Grade

AP HISTORY COURSES

The AP Program offers three history courses: AP European History, AP United States History, and AP World History. All three history courses focus on helping students develop historical thinking skills while they learn the required course content. Course themes foster deep analysis by making connections and comparisons across different topics. Each AP History course corresponds to two semesters of a typical introductory college history course.

AP WORLD HISTORY

The AP World History course focuses on developing students' understanding of the world history from approximately 8000 BCE to the present. This college-level course has students investigate the content of world history for significant events, individuals, developments, and processes in six historical periods, and develop and use the same thinking skills and methods employed by historians when they study the past. The course also provides five themes that students explore throughout the course in order to make connections among historical developments in different times and places encompassing the five major geographical regions of the globe.

Targeted Grade Level: 10th Grade.

AP UNITED STATES HISTORY

The AP U.S. History course focuses on the development of historical thinking skills and the development of students' abilities to think conceptually about U.S. history from approximately 1491 to the present. Seven themes of equal importance provide areas of historical inquiry for investigation throughout the course. These require students to reason historically about continuity and change over time and make comparisons among various historical developments in different times and places.

Targeted Grade Level: 11th Grade.

AP EUROPEAN HISTORY

The AP European History course focuses on developing students' understanding of European history from approximately 1450 to the present. The course has students investigate the content of European history for significant events, individuals, developments, and processes in four historical periods, and develop and use the same thinking skills and methods employed by historians when they study the past.

Targeted Grade Level: 12th Grade

AP SOCIAL SCIENCE COURSES

The AP Program offers two government courses: AP United States (U.S.) Government and Politics and AP Comparative Government and Politics. Each course is designed to be equivalent to a onesemester introductory college course. There is no prescribed sequence of study. A school may offer one or both courses.

AP U.S. GOVERNMENT AND POLITICS

AP United States Government and Politics introduces students to key political ideas, institutions, policies, interactions, roles, and behaviors that characterize the political culture of the United States. The course examines politically significant concepts and themes, through which students learn to apply disciplinary reasoning assess causes and consequences of political events, and interpret data to develop evidence-based arguments.

Targeted Grade Level: 12th Grade

AP COMPARATIVE GOVERNMENT & POLITICS

AP Comparative Government and Politics introduces students to the rich diversity of political life outside the United States. The course uses a comparative approach to examine the political structures; policies; and the political, economic, and social challenges among six selected countries: Great Britain, Mexico, Russia, Iran, China, and Nigeria. Additionally, students examine how different governments solve similar problems by comparing the effectiveness of approaches to many global issues.

Targeted Grade Level: 12th Grade

AP HUMAN GEOGRAPHY

The AP Human Geography course is equivalent to an introductory college-level course in human geography. The course introduces students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth's surface. Students employ spatial concepts and landscape analysis to examine socioeconomic organization and its environmental consequences. They also learn about the methods and tools geographers use in their research and applications. The curriculum reflects the goals of the National Geography Standards (2012).

Targeted Grade Level: 9th Grade