

# Brookwood High School

## Advanced Placement Offerings 2019-2020

**To register for one of these classes, see a teacher from that department or go to Arena.**

### Science

**The following AP Science courses require completion of Biology and Chemistry:**

**AP Biology** –Rigorous, in-depth college course that contains critical analysis and explanations of biological science.

**AP Chemistry** – Rigorous, college-level chemistry course work with advanced lab activities.

**AP Environmental Science** – Understand the relationships of humans to the natural world and learn how environmental problems arise and how we can work to resolve or prevent them. Covers ecology, energy resources, conservation, and pollution.

**AP Physics I** – Focuses on motion, forces, momentum, work, energy, circular motion, waves, sounds, basic electrostatics and electric circuits. Contains intense, algebra-based math content. *Co- or pre-requisite of Precalculus or Accel Precalculus or higher.*

**AP Physics C** – In-depth, calculus-based course that focuses on mechanics (motion), electricity, and magnetism. *Must have completed AP Physics I and completed or be enrolled in AP Calculus.*

### Math

**AP Statistics** – Delves into concepts of analyzing data, sampling, and experimentation, as well as anticipating patterns and statistical inference. *Completion of a minimum of Algebra II coursework is required.*

**AP Calculus AB** – Students will learn the concepts and skills of limits, derivatives, definite integrals, and the Fundamental Theorem of Calculus. *Completion of Accelerated Precalculus is required.*

**AP Calculus BC** – In addition to the content of AP Calculus AB, students explore properties of parametric equations, polar equations, vector value equations, and infinite series. *Completion of Accelerated Precalculus is required.*

### Fine Arts

**AP Studio Art** – This yearlong class is for students who are seriously interested in the practical experience of art. Students will create a portfolio of work to demonstrate mastery of artistic skills, processes, and ideas. Completion of Visual Arts Comp I & II (2D & 3D) and at least 1 year of an advanced art course are required.

### Career and Technical Education

**AP Computer Science Principles** – This course offers a multidisciplinary approach to teaching the underlying principles of computation. The course will introduce students to the creative aspects of programming, abstractions, algorithms, large data sets, the Internet, cyber security concerns, and computing impacts. *Concurrent advanced math course is required. Students with no prior programming experience should first take Intro to Digital Technology.*

**AP Computer Science A** – This course is an intense study of structured programming and advanced programming analysis. *Strong math skills are required. Completion of Computer Science Principles or extensive prerequisite programming skills and teacher interview are required. Must have completed or be enrolled in Accelerated Precalculus.*

### Social Studies

**AP Human Geography** – Includes the study of patterns and processes that have shaped human understanding, use, and alteration of the Earth's surface by interpreting human social organization and its environmental consequences. *Open to 9<sup>th</sup>-12<sup>th</sup> Graders.*

**AP World History** – Builds an understanding of the cultural, institutional, and technological aspects of historical civilizations that set the stage for the modern human era. *10<sup>th</sup> Grade Only.*

**AP US History** – Fuses factual knowledge and analytical skills in the interpretation of the history of the U.S. from the 1400s through the 1990s. *11<sup>th</sup> Grade Only.*

**AP US Government** – Examines the structure, function, and inter-relationships of various levels of government within the United States. Single semester course. *12<sup>th</sup> Grade Only.*

**AP Macroeconomics** – Studies national income, price determination, and economic performance and growth. Single semester course. *12<sup>th</sup> Grade Only.*

**AP European History** – Analyzes historical evidence and interpretations; requires students to express historical understanding through exploring principle themes of modern European history. *12<sup>th</sup> Grade Only.*

**AP Psychology** – Examines the scientific nature of psychology and brain/human development and function. *11<sup>th</sup>/12<sup>th</sup> Grade Only.*

### Foreign Language

All AP foreign language classes will continue to develop speaking, reading, writing, and listening skills, as well as continue the acquisition process of each culture. We offer AP courses in the following foreign languages:

#### AP French, AP Latin, AP German, AP Spanish

*Students must complete level 3 (or Spanish for Native Speakers in the case of Spanish) to enroll in an AP foreign language class.*

### Language Arts

**AP Language & Composition** – Students will read complex texts, including both non-fiction and fiction, as well as analyze language use in advertisement and rhetoric. Students will write engaging prose that emphasizes content and purpose. *Completion of 11<sup>th</sup> Lang Arts required.*

**AP Literature & Composition** – Students will read complex texts including fiction and poetry, to deepen their understanding of language as it is used to provide meaning/pleasure for the reader. Students will also on focus on writing about literature and literary analysis. *Completion of 11<sup>th</sup> Lang Arts required.*

**AP Capstone Program** – This two-year elective program is by application only during 10<sup>th</sup> Grade and consists of two courses:

**Year 1: AP Seminar** - Research-focused course in which students investigate real-world topics from multiple perspectives (often different/competing). Students learn to collect and analyze info with accuracy and precision, develop arguments based on facts, and effectively communicate them. *Course is integrated with 11<sup>th</sup> Grade Honors or Gifted Language Arts.*

**Year 2: AP Research** - Students will design, plan, and conduct a year-long, research-based investigation to address a student-selected research question/topic that can be focused on any major subject area. Students will learn and apply research methods and practices to address a real-world topic of their choosing. *Counts as a stand-alone elective during 12<sup>th</sup> grade.*