

Brookwood High School -RESTRICTED Core Course Offerings 2024-2025

* *Restricted Core Classes Requiring Teacher Approval, Prerequisites, Audition, and/or Application*

Language Arts

Yearbook: This class involves the production and sale of the school's yearbook. *See Chatham, E9.*

Seniors may choose from one of the following courses to meet their 12th Grade Language Arts requirement:

AP Language & Composition: Students will read complex texts, including both non-fiction and fiction with understanding, as well as analyze language use in advertisement and rhetoric. Students will write engaging prose that emphasizes content and purpose. *Completion of 11th Grade LA is required.*

AP Literature & Composition: Students will read complex fiction and poetry to deepen their understanding of language as it is used to provide meaning/pleasure for the reader, focusing on writing about literature and literary analysis. *Completion of 11th Grade LA required.*

British Literature: A Senior level Language Arts class in which students will critically examine, through reading and writing, literature of the British Literary canon. Offered at the Co-Taught, College Prep, and Honors/Gifted level.

British Literature through Creative Writing Lens: This course is designed for students to learn British Literature through the lens of creative writing. Students will gain a deeper understanding through independent creative writing and workshop-style feedback. Class is taught at an Honors level. *See Crawford, A213.*

British Literature through Business Lens: In this course, students will critically examine British Literature through an entrepreneurial lens. The theme of this culminating year of entrepreneurial language arts focuses on leadership in the business world.

Multi-Cultural Literature: Enables students to gain a better understanding of their own culture and the cultures of others, bridging the gap between diverse backgrounds.

Social Studies

AP Human Geography: Study the patterns and processes of human languages, religions, politics, and populations. *Open to 9th-12th graders.*

AP Psychology: In-depth examination of the scientific nature of psychology, including brain and human development. *11th –12th grade only*

World Geography: Learn the roles, responsibilities, and relationships of people and places throughout the world. Offered at CP level as an *Open Elective* and Honors/ Gifted as a *Restricted Elective*.

4th Year & Elective Science Options

The following classes meet the 4th year Science requirement and require completion of Biology and Chemistry:

Bioengineering: This course explores molecular and cellular biology, with corresponding laboratory experiments. Students will investigate transmission genetics, biomolecule structure and function, control of the cell signaling pathways, and protein functions.

Anatomy & Physiology: Advanced, rigorous, in-depth study of the structure and function of the human body.

Forensics: Explore the scientific and technological aspects of criminal investigations. Topics include DNA, fingerprinting, blood, and evidence collection.

NRM: Aquaponics: Learn conservation, maintenance, and good stewardship of air, soil, water, land, and wildlife resources for economic, recreation, and health purposes. Includes aquaponics, ag STEM, entrepreneurship, and marketing.

Game Design: This class provides an advanced look at game design, animation, and game physics. *Prerequisite – CSP, AP CSP, or AP CS A. See Mr. Winzeler in F30.*

Forestry Science: Students are exposed to multiple concepts such as the establishment of forests, identification of tree species, dendrology foundations, and forest economics through classroom and lab activities. *Requires prerequisite of Bio and Chem OR Bio and Basic Ag Science. 10th-12th grade only.*

Appropriate and Alternative Energy: Learn differences between nonrenewable and renewable energy sources and how they affect your world. Fall Semester Physics will be integrated for an additional half credit. Students should plan to take Energy & Power Tech in 11th grade to complete the Physics requirement. *9th grade only*

Robotics and Mechatronics: This course builds upon the foundation students acquire in physics and provides an overview of robot mechanisms, dynamics, and systems. *Requires concurrent or prerequisite of Physics.*

Energy & Power Technology: Project-based course that explores the relationships between force, work, energy, and power with applications in industry and society. *Requires concurrent or prerequisite of Physics.*

AP Computer Science A: An intense study of structured programming and advanced programming analysis. Completion of Computer Science Principles or extensive prerequisite programming skills and teacher interview are required. Pre- or co-req of Accelerated Precalculus.

AP Environmental Science: Builds a foundation for understanding the relationships of humans to the natural world. Shows how environmental problems arise and how we can work to resolve or prevent them. Covers ecology, energy resources, conservation, and pollution.

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

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. *Students should be concurrently enrolled in Precalculus or Adv Precalculus or higher.*

AP Chemistry: Rigorous, college-level chemistry coursework with advanced lab activities.

AP Physics C: Calculus-based, college-level physics course focusing on motion (mechanics), electricity, and magnetism. *Requires completion of AP Physics I and completion or concurrent enrollment in AP Calculus.*

Sports Medicine: Focuses on the musculoskeletal system, injury assessment and prevention, or rehabilitation. Exposure to therapeutic services skills, the healthcare industry, preventative and rehabilitative care as well as medical terminology, kinesiology, patient assessment, record keeping, and basic life support.

Foreign Language (elective)

Spanish for Native Speakers 1: This class is designed for students who speak Spanish at home but have had no formal schooling in the language; a placement exam is given at the beginning of the semester to ensure proper placement.

Honors Level I: Students will gain a deep understanding of the foundations of the Spanish, French, German, and Latin languages. Students will learn to communicate in oral and written form and will gain cultural knowledge of the countries in which the languages are/were spoken. This course is appropriate for students who are registered for at least two core classes at the Honors, Gifted, or AP level and is the track for students who intend to take an AP-level language course. Students should see any Foreign Language teacher or go to Arena to register for this course and for information on Foreign Language Years 2, 3, 4, 5, and AP options.

Physical Education (elective)

Weight Training (Boys)/ Body Sculpting (Girls): Focus on conditioning, building strength, and endurance which requires lifting weights and other physical fitness training. *Personal Fitness and Health are prerequisites.* Students may go to Arena, see any PE teacher, or see a team coach to register for these classes.

Brookwood High School

Advanced Placement Offerings 2024-2025

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 coursework with advanced lab activities.

AP Environmental Science – Study the relationships of humans to the natural world; 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 prerequisite of Precalculus or Adv Precalculus or higher.

AP Physics C – In-depth, calculus-based course focusing on mechanics, electricity, and magnetism. Prereq. of AP Physics I and completed or enrollment in AP Calculus.

Math

AP Statistics – Analyzes data, sampling, and experimentation, as well as anticipating patterns and statistical inference. Prerequisite is a minimum of Adv Alg.

AP Calculus AB – Students learn the concepts of limits, derivatives, definite integrals, and the Fundamental Theorem of Calculus. Precal completion required

AP Calculus BC – Contains AP Calc AB content, plus explores properties of parametric and polar equations, vector value equations, and infinite series. Pre-req of Precal.

AP Precalculus – This research-based class centers on functions modeling dynamic phenomena that are foundational for careers in mathematics, physics, biology, health science, business, social, and data science. Completion of a minimum of Adv Alg. coursework 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 required.

AP Music Theory – This course develops a student's ability to recognize, understand, and describe the basic materials and processes of music that are heard or presented in a score. A strong focus is placed on music notation, composition, analysis, and the development of aural skills. Students must have prerequisite experience reading music prior to this course. This course should be in addition to your performing arts class.

AP Art History – This college level class examines the evolution of humanity's relationship with self-expression through visual art, video, and architecture. From Paleolithic cave drawings to contemporary global art, students analyze each piece for its significance in the evolution of the artistic process, including use of medium, historical significance, and symbolic meaning.

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, and 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.

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 9th-12th Graders.*

AP World History – Study the cultural, institutional, and technological aspects of historical civilizations that set the stage for the modern human era. 10th Gr Only.

AP US History – Fuses factual knowledge & analytical skills in the interpretation of the U.S. history from the 1400s -2000s. *11th Grade Only.*

AP US Government – Studies the structure, function, and inter-relationships of various levels of US government. Single semester course. *12th Grade Only.*

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

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

AP African American Studies -This is an interdisciplinary course that reaches into a variety of fields—literature, the arts and humanities, political science, geography, and science—to explore the vital contributions and experiences of African Americans. *11th/12th Grade Only*

Language Arts

AP Language & Composition – Students will read nonfiction and fiction complex texts, as well as analyze language used in advertisement and rhetoric. Students will write engaging prose that emphasizes content and purpose. Completion of 11th Lang Arts required.

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

AP Capstone Program – This two-year elective program is by application only during 10th Grade and consists of two courses-

Year 1: AP Seminar - Research-focused course that investigates real-world topics from multiple perspectives (often different/ competing). Learn to collect and analyze info with accuracy and precision, develop fact-based arguments, and effectively communicate them.

Year 2: AP Research - Students 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; learn and apply research methods and practices to address a real-world topic of their choosing. Counts as a stand-alone elective during 12th grade.

Career and Technical Education

AP Computer Science Principles (with Integrated Intro to Software Technology) – This AP-level course, AP CSP, is the foundation for the Computer Science and Game Design Pathways and offers a multidisciplinary approach to teaching the underlying principles of computation. AP CSP introduces students to the creative aspects of programming, abstractions, algorithms, large data sets, the Internet, cyber security concerns, and impactful computing. Students who excel in advanced math are recommended to register for this course at the AP level. This course is not open to students who already have credit for Computer Science Principles. Students earn 2 units of credit in 1 class period.

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