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**2020-2021**

**ADVANCED PLACEMENT COURSE**

**Availability and Course Descriptions**

[**https://ap.collegeboard.org/**](https://ap.collegeboard.org/)

# AP Courses Offered

AP Biology AP Computer Science A AP Literature and Composition

AP Calculus AB AP Environmental Science AP Physics I

AP Chemistry AP Human Geography AP Psychology

AP Computer Science Principles AP Language and Composition AP US Government and Politics

# Brief Course Descriptions

# 10th Grade

# *AP Biology* is organized around a few underlying principles called the big ideas, which encompass the core scientific principles, theories and processes governing living organisms and biological systems. The 4 Big Ideas are: Evolution, Cellular Processes: Energy and Communication, Genetics and Information Transfer and Interactions. Prerequisite: Biology and Teacher Recommendation.

# *AP Computer Science Principles* provides the fundamentals of computing, including problem solving, working with data, understanding the Internet, cybersecurity, and programming. Broadening your understanding of computer science for use in a diversity of majors and careers. Prerequisite: Coding I.

# *AP Human Geography* 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 human social organization and its environmental consequences. They also learn about the methods and tools geographers use in their science and practice.

# 11th Grade

# \*Along with any 10th Grade AP Courses

# *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. You’ll learn how to approach calculus concepts and problems when they are represented graphically, numerically, analytically, and verbally, and how to make connections amongst these representations. You will learn how to use technology to help solve problems, interpret results, and support conclusions. Prerequisite: Pre-calculus and Teacher Recommendation

# *AP Computer Science A* delivers the fundamentals of programming and problem solving using the JAVA language. Developing skills for future study or a career in computer science or other STEM fields. Prerequisite: AP Computer Science Principles, Algebra II and Teacher Recommendation.

# *AP Environmental Science* offers you the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving and/or preventing them. Prerequisites: Biology and Teacher Recommendation

# *AP English Language and Composition* course is designed to help you become a skilled reader of a variety of texts as well as becoming a skilled writer. You’ll achieve this through awareness of the interactions among a writer's purposes, audience expectations, and subjects, as well as the ways that writing rules and language use contribute to effective writing. Skill in writing proceeds from your awareness of your own composing processes: the way you explore ideas, reconsider strategies, and revise your work. This experience of the process of composing is the essence of the first-year college writing course, and the AP English Language and Composition course emphasizes this process. Prerequisite: Teacher Recommendation.

# *AP Psychology* introduces the systematic and scientific study of the behavior and mental processes of human beings and other animals. Included is a consideration of the psychological facts, principles, and phenomena associated with each of the major subfields within psychology. Students also learn about the ethics and methods psychologists use in their science and practice.

# *AP U.S. Government and Politics* provides a college-level, nonpartisan introduction to key political concepts, ideas, institutions, policies, interactions, roles, and behaviors that characterize the constitutional system and political culture of the United States. You will study U.S. foundational documents, Supreme Court decisions, and other texts and visuals to gain an understanding of the relationships and interactions among political institutions, processes, and behavior. You’ll also engage in disciplinary practices that require you to read and interpret data, make comparisons and applications, and develop evidence-based arguments. In addition, you’ll complete a political science research or applied civics project. Prerequisite: Teacher Recommendation.

# 12th Grade

# \*Along with any 10th and 11th Grade AP Courses

# *AP Chemistry* is designed to develop a deep understanding of the concepts within the big ideas through the application of the science practices in the required laboratory component of the course. The Big Ideas are:

# 1. Structure of Matter 3. Bonding and Intermolecular Forces 5. Chemical Reactions

# 2. Kinetics 4. Thermodynamics 6. Chemical Equilibrium

# Students must complete a minimum of 16, hands-on lab investigations to support the learning objectives in the curriculum framework. At least six of the lab investigations must be guided inquiry-based labs. All labs conducted at Logan University. Prerequisites: Chemistry I, Pre-calculus and Teacher Recommendation.

# *AP English Literature and Composition* explores literary elements such as a work’s structure, style and themes, as well as the use of figurative language, imagery, symbolism and tone. Develop your writing skills as you express your ideas and analysis in expository, analytical, and argumentative essays. Prerequisite: Teacher Recommendation.

# *AP Physics I is* an algebra-based, introductory college-level physics course. Students cultivate their understanding of physics through inquiry-based investigations as they explore these topics: kinematics; dynamics; circular motion and gravitation; energy; momentum; simple harmonic motion; torque and rotational motion; electric charge and electric force; DC circuits; and mechanical waves and sound. Prerequisites: Pre-calculus and Teacher Recommendation.

# *AP Spanish Language and Culture* is a rigorous course taught exclusively in Spanish. This course requires students to improve their proficiency through reading, writing and speaking. This course focuses on the integration of authentic resources such as: online print, audio, and audiovisual resources, as well as traditional print resources that include literature, essays, and magazine and newspaper articles, and other materials, all with the goal of providing a diverse learning experiences. Students communicate using rich, advanced vocabulary and linguistic structures as they build proficiency within the target language. Students demonstrate an understanding of the cultures within the Spanish speaking countries, make comparisons between the native language and the target language as well as in between cultures, and the use of the target language in real-life settings. Prerequisites: Spanish II and Teacher Recommendation.