Sciences

AP Biology – is equivalent to a 2-semester college introductory biology course. Focus is on inquiry-based learning of essential concepts and developing reasoning skills to engage in science practices. Students will plan, collect and analyze data, apply mathematical routines and connect concepts. **Requirements:** Biology and Chemistry, Honors STRONGLY recommended . **Recommended:** Successful completion, 85 or above, of honors-level biology and honors-level chemistry. Open to students in 11th and 12th grade.

AP Chemistry – is equivalent to a general chemistry first-year college course. Focus is on inquiry-based learning of essential concepts and developing reasoning skills to engage in science practices. Students will plan, collect and analyze data, apply mathematical routines and connect concepts. **Requirements:** Chemistry, Honors STRONGLY recommended. **Recommended:** Successful completion, 85 or above, of honors-level chemistry and accelerated math courses. Open to students in 11th and 12th grade.

AP Environmental Science - is equivalent to a one-semester introductory college course in environmental science. It provides students with the scientific principles, concepts, and methodologies required to understand the inter-relationships 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 or preventing them. **Requirements:** Biology and Chemistry, Honors STRONGLY recommended. **Recommended:** Successful completion, 85 or above, of honors-level biology and honors-level chemistry. Open to students in 11th and 12th grade.

AP Computer Science – is equivalent to a first-semester college level course in computer science. The course emphasizes object-oriented programming methodology with a concentration on problem solving and algorithm development. It also includes a study of data structures, design and abstraction. The topics are covered in detail, through reading assignments and class discussion, from a mostly theoretical aspect, with programming tasks designed to support the learning of programming theory and preparation for the AP exam. **Requirements:** none **Recommended:** Successful completion, 85 or above, of Accelerated/Honors/AP math courses (especially if attempting to take as a 10th grader) OR successful completion of the Intro to Digital Technology and Computer Science Principles courses (which will provide an introduction to programming concepts and the Java language); PSAT Math and Reading scores of 50 or above. Open to students in 10th, 11th, and 12th grade.

AP Physics 1: Algebra-Based – is the equivalent to a first-semester college course in algebra-based physics. The course covers Newtonian mechanics (including rotational dynamics and angular momentum); work, energy and power; mechanical waves and sound. It will also introduce electric circuits. **Requirements:** Math III **Recommended:** Successful completion, 85 or above, in Math III or its equivalent. Open to students in 11th and 12th grade.

AP Physics C: Mechanics - is the equivalent to a first-semester college course in calculus-based physics. The course covers kinematics; Newton's laws of motion; work, energy and power; systems of particles and linear momentum; circular motion and rotation; and oscillations and gravitation. **Requirements:** Calculus as a co/prerequisite requisite. **Recommended:** Successful completion, 85 or higher of AP Physics 1 and Calculus. Open to students in 12th grade and 11th grade by teacher recommendation.