

General Course Information

Course Name: AP Physics I	
Department: Science	Grade Level(s) 11-12
Duration/Credits: 2 Semesters/1 Credit	Prerequisites: Students interested in taking AP Physics must have successfully completed high school geometry and be concurrently enrolled in Algebra II. Students should be able to read and comprehend college level text, take independent notes, follow multi-step procedures, and keep up with a rigorous level of coursework. Students should have a strong understanding of the following: Performing algebraic manipulations of mathematical equations, trigonometry focusing on the use of sine, cosine and tangent, and creating a graph using data and interpret said graph using tools such as slope and area.
BOE Approval Date: December 2022	Course Code: H3270W
Course Description:	
This course is the equivalent of a general physics course typically taken the first semester of the freshman year in college. It provides an introduction to the main principles of physics and emphasizes the development of problem-solving ability. The focus will be on Newtonian mechanics with units including Kinematics, Dynamics, Circular Motion and Gravitation, Energy, Momentum, Simple Harmonic Motion and Rotational Dynamics. Dual Credit and Advanced Placement credit offered.	
Course Rationale:	
In a world filled with the products of scientific inquiry, scientific literacy is a necessity for everyone in order to use scientific information to make wise choices. Today, the job market demands advanced skills, requiring people to be able to learn, reason, think creatively, make decisions, and solve problems. An understanding of science and the processes of science contribute in an essential way to these skills.	

Course Objectives:
1. The student will use representations and diagrams to communicate scientific phenomena and solve scientific problems. 2. The student will use mathematics appropriately. 3. The student will engage in scientific questioning to extend thinking or to guide investigations within the context of the AP course (A+: Speaking) 4. The student will plan and implement data collection strategies in relation to a particular scientific question. 5. The student will perform data analysis and evaluation of evidence. 6. The student will research scientific explanations and theories to support his or her physics investigations (A+: Research) 7. The student will connect and relate knowledge across various scales, concepts, and representations in and across domains (A+: Reading) 8. The student will describe, in writing, the motion of a projectile and predict and determine the final location of that projectile (A+: Writing)
Standards Alignment:
AP Standards for AP Physics 1