Advanced Placement Physics 1

Text:	***College Physics***, Etkina, Gentile, and Heuvelen, 1st Edition. ***College Physics***, Knight, Jones & Field, 1st edition.

Supplementary Materials	From various sources, including College Board

Course Description	AP Physics 1 is equivalent to a first-semester introductory college-level physics course. The course is algebra-based and incorporates algebra, basic use of trigonometric functions and vector analysis for problem-solving methods. The course is designed for serious, self-motivated science and math students seeking a challenge with the reward of possible college credit. Topics explored in the class include Newtonian mechanics (including rotational motion); work, energy, and power; mechanical waves and sound; and introductory, simple circuits. The course requires a minimum 25% of instructional time be devoted to hands-on laboratory work with an emphasis on inquiry-based investigations and experimental design. The course requires a significant amount of independent work outside the classroom. All students will take the Advanced Placement exam at the end of the course. This course may be taken in lieu of or following Physics. Prerequisite: Algebra I and Geometry or concurrent enrollment in Geometry; and Instructor approval.

Methods of Evaluation	Students may be evaluated through tests, laboratory reports and quizzes, concept quizzes, class work, homework, projects, semester exams and/or use of other evaluation instruments the instructor finds applicable to the course.

Pace of Instruction	The course meets for 45 minutes a day, 5 days a week for the number of days seniors are present. Large portions of weekly class time are devoted to laboratory investigations. Labs are completed approximately once every one to two weeks and may take from one to three class periods. The course requires a heavy workload and independent project work to be completed outside the classroom. The content is completed in time to allow review for the AP Exam. Unit 1 Kinematics Unit 2 Dynamics Unit 3 Work, Energy / Conservation of Energy Unit 4 Circular Motion Unit 5 Momentum / Conservation of Momentum Unit 6 Rotational Motion Unit 7 Simple Harmonic Motion Unit 8 Mechanical Waves and Sounds Unit 9 Electrostatics Unit 10 DC Circuits Preparation for AP Exam