

Course Introduction

AP Physics 1 is a yearlong course designed to develop your scientific reasoning skills and inspire in you a greater appreciation for God's handiwork displayed in the laws of nature. AP Physics is all about observing motion and interactions of objects. By collecting and analyzing data, you will develop an understanding of the principles that govern these behaviors and develop the skills of data collection and analysis. You will explore these topics through interactive reading activities, animations, class discussions and online research, as well as inquiry-based laboratory experiment simulations.

Your main resource for the course is College Physics for the AP Physics 1 Course, 2nd Edition, Stewart, Freedman, Ruskell, and Kesten. This is a print or digital textbook that comes with additional online resources sponsored by Sapling. The Sapling site is where you will complete online homework, and it provides immediate feedback as well as hints and tutorials. The course also relies heavily on The Physics Classroom (www.physicsclassroom.com), an online resource created by a physics teacher and now supported by NSF. Your coursework will include reading and completing self-check assignments, problem solving, assignments based on simulations provided by PhET (phet.colorado.edu), class discussions, and exams. This course is designed to prepare you for success on the AP exam and college level physics courses. The math in the course includes algebra, geometry, and right triangle trigonometry.

This is a yearlong course consisting of 8 units. Upon successful completion students will receive 1 credit towards high school graduation.

Course Overview

Semester 1

- Kinematics
- Dynamics
- Circular Motion and Gravitation
- Work and Energy

Semester 2

- Momentum and Impulse
- Simple Harmonic Motion
- Torque and Rotational Motion
- AP Test Prep

Required Course Materials

Please access the list of course materials from the OC Online book ordering system and order your materials as soon as possible. Oftentimes, course materials are on back order and you may experience a delay in receiving them, causing students to fall behind in their online coursework. When ordering used or rented materials, be careful that online access codes are also current.

Grading Policy

Students will demonstrate mastery through the following formative and summative assessments:

- 40% Assignments
- 10% Participation
- 10% Quizzes
- 25% Final Exam
- 15% Unit Tests

Additional Course Information

Detailed information regarding OC Online policies on proctored final exams, grading policy, late/missing assignment policy, weekly live classes, course expectations, and additional school policies can be found on the website.