

Course Description

Welcome to AP Physics 1. This is a year-long 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. The course work will cover mechanics, waves, and electricity. 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. This course is designed to prepare you for success on the AP exam and college level physics courses. The math ability required in this course includes algebra, geometry, and right triangle trigonometry.

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

AP Courses and Testing

"Have you ever been curious as to why some objects float while others sink? Why is it easier to balance on a bicycle when it's moving fast? Or why it may seem like you're moving backward when a car passes you on the highway? In AP Physics 1: Algebra-Based, you'll learn about kinematics, dynamics, and energy through hands-on laboratory work to investigate and answer questions such as these." - [College Board](#)

Completing the College Board's AP Testing in May is an expectation of the course. Based on the results of AP tests in May of each year, students may be eligible to receive college credit. However, every college and university handles AP credit differently. In addition, the course completion grade is weighted like an honors course, potentially improving a student's overall GPA.

Registering and paying to take the AP test is the responsibility of the student and family. OC Online staff assists in helping students locate appropriate testing locations, including the Oaks Christian School campus if a student lives in proximity.

Course Overview

Course Outcomes

- Creating representations that depict physical phenomena
- Conducting analyses to derive, calculate, estimate, or predict
- Describing experimental procedures, analyzing data, and supporting claims

Semester 1 Units:	Semester 2 Units:
1. Kinematics	5. Momentum and Impulse
2. Dynamics	6. Simple Harmonic Motion
3. Circular Motion and Gravitation	7. Torque and Rotational Motion
4. Work and Energy	8. Fluids

Methods of Instruction

Online courses give students the opportunity to prepare for college through material and learning methods. Instruction comes through the Canvas course platform, one thirty-minute live class per week, and teacher grading and feedback on assessments. Strong executive function skills serve students well as they navigate the course. Forms of assessment include self-check assignments, online labs (simulating lab work, data collection and analysis), class discussions, quizzes, and tests.

Methods of Evaluation

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

- 40% Assignments
- 10% Participation (Discussion Posts, Live Classes)
- 10% Quizzes
- 15% Tests
- 25% Final Assessment

Additional Course Information

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