



## Introduction to AP Physics Courses

Advanced Placement course in physics have four options to choose from:

- AP Physics 1
- AP Physics 2
- AP Physics C – Mechanics
- AP Physics C - Electricity and Magnetism

AP Physics 1 is the equivalent of a first-semester, algebra-based college physics course. It is the most introductory of the AP Physics options and it covers Newtonian mechanics (including rotational motion), work, energy, power, mechanical waves and sound, and introductory, simple circuits. There are no formal prerequisites for AP Physics 1, but you will need to have completed geometry and be concurrently taking Algebra II or an equivalent course to grasp the calculations required for the coursework.

AP Physics 2 is the equivalent of a second-semester, algebra-based college physics course covering fluid statics and dynamics, thermodynamics with kinetic theory, PV diagrams and probability, electrostatics, electrical circuits with capacitors, magnetic fields, electromagnetism, physical and geometric optics, and quantum, atomic, and nuclear physics. AP Physics 2's topics are generally more abstract and thus more difficult than AP Physics 1. Before you begin AP Physics 2, you will need to have completed AP Physics 1 or a comparable introductory physics class. You should also have taken or be taking concurrently Pre-calculus or the equivalent.

AP Physics C - Mechanics is the equivalent of a calculus-based first-semester college physics course. This class covers kinematics, Newton's laws of motion, systems of particles and linear momentum, circular motion and rotation, oscillations and gravitation, and work, energy and power while using differential and integral calculus throughout the course. There are no formal prerequisites for the class, but students should be prepared for college-level calculus-based work and must at minimum have taken or be concurrently taking calculus.

AP Physics C - Electricity and Magnetism is the highest level AP Physics course available. This class covers electrostatics, conductors, capacitors, and dielectrics, electric circuits, magnetic fields, and electromagnetism while using differential and integral calculus throughout the course. The College Board strongly recommends that AP Physics C - Electricity and Magnetism be taken as a second year physics course. Students should be prepared for college-level calculus-based work and must at minimum have taken or be concurrently taking calculus.