

## Advanced Placement Physics

**Course Number:** 502

**Course Title:** Advanced Placement Physics

**Department:** Science

**Open to Students in Grade:** 10-12

**Any Required Prerequisite Courses:** Physics (preferably honors), strong algebra background



### Topics Addressed/Skills Developed:

AP Physics is a second year physics course structured to provide instruction in the content areas outlined by the College Board for the Physics 2 curriculum. Those areas are:

- *Thermodynamics: laws of thermodynamics, ideal gasses, and kinetic theory*
- *Fluid statics and dynamics*
- *Electrostatics: electric force, electric field and electric potential*
- *DC circuits and RC circuits (steady state only)*
- *Magnetism and electromagnetic induction*
- *Geometric and physical optics*
- *Quantum physics, atomic, and nuclear physics*

Since AP physics is a second year course, incoming students have had a solid introduction to most of Newtonian Mechanics, Electricity & Magnetism, and Waves. Using this as a starting point, AP physics addresses the topics listed above, although not necessarily in the same order. Labs will often be inquiry-based, and a definite emphasis will be placed on conceptual and global understandings as well as on problem solving. In addition to providing instruction for the Course 2 exam, topics from the physics 1 curriculum will also be reviewed and re-addressed as necessary.

### Approximate or range of hours of homework per class meeting:

0.5-1.5 hours, plus additional time for student-directed studying and review as necessary

**Textbook / informational text reading amount:**

Reading and problems from either/both of the textbooks listed below is usually assigned for homework after every class.

**Etkina, College Physics AP<sup>®</sup> Edition and Giancoli, Physics, 6<sup>th</sup> edition**

**Types of large assessments in this course:**

Unit tests, labs, quizzes, midterm exam, final exam, AP Exam, final project.

Level of Independence Expected:	More Independent → Less Independent				
<b>Assessment:</b> 5 = anything can be assessed 1 = only things explicitly discussed in class are assessed	5	4	3	2	1
<b>Project/Class Work:</b> 5 = little to no class time 1 = almost all the work will be done in class	5	4	3	2	1
<b>Level of Collaboration:</b> 5 = frequently (almost every class) 1 = infrequently (almost never)	5	4	3	2	1

[2021 AP Course Overview - AP Physics 2: Algebra-Based](#)