

Use these links for full course outlines and descriptions

**AP Physics 1:** <https://apstudent.collegeboard.org/apcourse/ap-physics-1>

**AP Physics 2:** <https://apstudent.collegeboard.org/apcourse/ap-physics-2>

## AP Physics 1&2 Policies & Expectations

**Course Description :** These courses are designed for college bound 11th and 12th graders. They are year-long algebra-based physics course that is the equivalent to a first or second semester college courses in algebra-based physics. **AP PHYSICS 1** covers Newtonian mechanics (including rotational dynamics and angular momentum); work, energy, and power; and mechanical waves and sound. It will also introduce electric circuits. **AP PHYSICS 2** continues on to the second semester of college physics covering fluid mechanics, thermodynamics, electricity & magnetism, optics and topics in modern physics. Students will utilize their critical thinking and reasoning skills to obtain a conceptual and mathematical understanding of physics. The ability to develop and use physics knowledge by applying it to the practice of scientific inquiry and reasoning is at the heart of the physics course and AP exam. Focusing on these skills allows for the use of principles of scientific inquiry to promote a more engaging experience for AP Physics students. This model will provide time to cover the concepts and skills students will need to demonstrate in order to potentially earn credit for the introductory algebra-based college physics course. At the conclusion of each course, students may elect to take the AP exam to potentially obtain college credit.

**Prerequisite:** A grade of a C or better in Geometry, Algebra and Chemistry and concurrently enrolled in Algebra 2. AP Physics 2 requires a C or better in AP Physics 1.

**Textbook:** Knight, Jones and Field, College Physics: A Strategic Approach-AP Edition, 2014.

**Required Materials:** textbook, scientific calculator, binder w/folder or dividers, paper, pencil, colored pens (highly recommended).

### **AP EXAM:**

A calculator and equation sheet is allowed on both sections of the exam.

**PART 1:** 50 Multiple Choice questions; 90 minutes

**PART 2:** 5 Free Response Questions; 90 minutes (including experimental design, essay, problem solving questions)

**GRADING:** Marking period grades will be based on scores in the following 5 weighted categories. Scoring on some quizzes and all tests will be adjusted based on AP scoring trends. To pass the semester and earn credit, one must pass 2 of 3 marking periods and/or semester exams. Marking periods are 40% and the semester exam is 20% of the semester grade.

## **I. Assessments:** 65% of marking period grade

- Tests will be given at the end of each unit, possibly covering several chapters.
- Tests will have two parts. Part 1 will be multiple choice and Part 2 will be free response. These questions will all be very similar to the questions seen on the AP Physics exam.
- Test scoring will be of similar weighting to the AP exam (curved).
- You may use your calculator (no phones) and equation sheet on assessments.
- You will have approximately 2 tests per marking period.
  
- Quizzes may be given at any time; they may be quick pop quizzes on homework or end of chapter quizzes.
  
- Pop quizzes will be reflective of what we are covering within that day or so. They may be a few questions on the previous night's reading assignment, or a question that relates to the problems assigned, etc.
- Chapter quizzes will contain free response types of questions that you may see on the AP Exam. The content could cover the labs, require you to design labs, analyze a situation and write a paragraph, or mathematically solve problems.

## **II. Labs:** 25% of marking period grade

- Most labs will be inquiry based. This means that they are designed for students to be discovering physical phenomena, not just following a set of instructions to verify a value. Some labs may occur before teaching any material so that students can become familiar with some phenomena so that we can have class discussions. Additional labs may require students to design their own procedure to solve a presented question. Others may require students to pose the question and then continue on through the design and implementation process.
- Occasionally, classes will be engaged in culminating lab activities where students must design a lab based on knowledge and skills obtained in class. Such labs may be used as performance-based assessments.
- Labs may be on whiteboards, teacher created packets, or "white sheets". All labs, including notes from class whiteboarding, must be kept in a binder or folder. Sometimes a college or university may request verification of appropriate lab work to grant credit for the lab portion of the course if AP credit is earned through testing.

## **III. Homework:** 10% of marking period grade

- Homework will be assigned daily. It may be reading a section of the chapter, solving a set of problems, preparing for a lab the next day, etc.
- Homework is not meant to be hours long each night; it is intended to keep you continuously thinking about what we are studying and giving you an opportunity to put to practice what we are learning.

**Classroom Rules:**

1. Rudeness will not be tolerated.
2. Come to class on time and prepared.
3. Bathroom, drinking fountain, and business outside of class can be handled at appropriate times.
4. Late work is not accepted.
5. Be responsible with lab equipment and respectful of other peoples' belongings.
6. The school attendance policy is enforced. This includes school related absences.
7. Follow all safety precautions when working in the lab.
8. Dress code will be enforced.

**Absences:**

Attendance is essential to success. Every moment of the class is designed for learning. Labs, group work and discussions cannot be replicated. While it is understood that family emergencies, appointments with specialists and illnesses do occur, missing class because you have a test or a paper due in another class and you are not prepared is inexcusable. In the event that you do miss class, you have two days after an excused absence for makeups (district policy), if applicable. Very often, labs CAN NOT be made up. If your absence is due to a school related function, you are to make arrangements PRIOR to the absence, as described in District policy.

**Grade Scale:** The grading scale below is applicable only for the assignment of marking period letter grades. Semester grades will utilize a modification of the overall percentage obtained over the semester and the semester exam.

<b>A+</b>	<b>&gt;97%</b>	<b>B+</b>	<b>87-89.9%</b>	<b>C+</b>	<b>77-79.9%</b>	<b>D+</b>	<b>67-69.9%</b>
<b>A</b>	<b>93-96.9%</b>	<b>B</b>	<b>83-86.9%</b>	<b>C</b>	<b>73-76.9%</b>	<b>D</b>	<b>63-66.9%</b>
<b>A-</b>	<b>90-92.9%</b>	<b>B-</b>	<b>80-82.9%</b>	<b>C-</b>	<b>70-72.9%</b>	<b>D-</b>	<b>60-62.9%</b>
						<b>E</b>	<b>&lt;60%</b>