

## AP Physics 1 Syllabus

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### OVERVIEW

Physics is nothing more than the study of nature; it is rational man's attempt to understand the universe in which he is situated. Every day, physicists learn new and amazing things about our universe, from the behavior of subatomic particles to the composition of distant stars. In fact, recent discoveries have even begun to challenge some of our most fundamental beliefs about reality. In this class we will use inquiry to discover some of the eloquent and universal laws that govern our world.

### SUPPLIES

- You will need loose paper for labs and a place to take notes, pencil and/or pen (ink is preferable for labs)
- You will need a section in your notebook for course notes and handouts.
- We will use an on-line text for reading assignments and homework.
- Scientific calculators will be needed in class almost every day.

### Note Taking and Study Skills

- I am leaving much of this up to your discretion. I will post as much information as I can to the website but know that you are responsible for understanding all of the material written and discussed in class as well as all material assigned for home work.
- Plan time to work on physics outside of class every day. You should expect 1-3 pages of reading and 2-5 questions a night.
- **Ask Questions**

### Home Work:

The majority of the homework for this class will be given through **WebAssign**. This will cost about \$11 for each student. Students will need to create their own accounts and pay the fee online. We are electing to use WebAssign because it allows students instant feedback on assignments, and encourages students to collaborate while still doing their own work. I highly recommend that students support each other but keep in mind that plagiarism will not be tolerated. Instructions for purchasing an account will be forthcoming.

### Labs

Labs generally hold equal weight as tests and the two make up the bulk of the AP Physics grade. Lab work can't be made up for full credit unless you can arrange to do the lab at a later date, you are responsible for bringing a partner to the make up to help. Obtaining data from your lab partner, clearly identifying its source and processing it correctly and completely may earn up to half credit. Labs cannot be revised unless prompted by the teacher.

### Tests

Tests will usually cover one entire unit including labs & demos from class. The tests will consist of multiple choice questions and AP free response problems. Tests will be closed book and are written to help prepare students for the AP exam. Calculators are required for the problems. If you are absent for a test, you must arrange to take it on your own time (Bear Time, lunch, after school). The test must be made up within 3 school days or receive a grade of zero. Homework and all written work is due before the test begins.

### Final Exams

There will be a cumulative final exam given at the end of the first semester in January and just before the AP exam in May. Each will be worth ~10% of the semester grade.

### AP Test

This course is designed to align with the content of the AP Physics 1 test. Throughout the course, questions will be pulled from old AP tests to help students get acquainted with the format. For students who have taken AP

Calculus, AP Physics C materials will be provided. This content is neither required nor collected for class credit. The goal is that it will prepare those who wish to take the AP Physics C Mechanics test to do so.

## **Math**

You must have passed or currently be enrolled in Algebra 2. We will discuss calculus but it is not required.

## **GRADES**

My goal is that the grades you receive in Physics are more instructive than punitive. Receiving a poor grade on an assignment should come with hope for redemption, not despair. You can always discuss your homework or labs before submission to make sure you are on the right track. Homework should give you a clear indication of how ready you are for each test.

- We will follow grade cut offs used in other OHS science classes.
- Work needs to be done before arriving in class unless previously stated.
- Explanations should be in full, complete sentences.
- Work must be shown in “smooth form” for all calculations unless you are told otherwise.
- Check the class website for homework assignments and due dates.

## **Attendance**

Late arrivals disrupt the flow of the class, plan ahead to arrive on time. If you arrive late it is your responsibility to make sure I change attendance records before you leave the class. If you know you are going to be **absent**, let me know ahead of time and then check back in when you are back in class. Expect to make up the work that you missed.

## **Cell Phones**

Technology is a wonderful thing and we are likely to have situations where having a cell phone is extremely helpful. Bring your phone to class but please turn it on **silent**. While, I or anyone else, is talking to the class is *never* an appropriate time to be using your phone.

## **Integrity**

High school is a good time to realize that no grade is worth more than your integrity. The word integrity has the same Latin root as integer, meaning whole. A person without integrity is not whole; half of them is a polite student but the other half is someone who will cheat to gain an advantage. They are the same person who uses cheat programs to play Words with Friends or doesn't pick up litter when no one sees them drop it. Live with integrity. Don't get into the habit of cheating in high school. It will not serve you well in life.

## **Catching Up**

As an AP instructor, it is my responsibility to prepare you for college level classes. I want each person in the class to succeed but you must be proactive about your education, I provide reminders and aid but require that you do your work. Whatever the reason for your absence may be, it is always easier to catch up the moment you realize you are getting behind. If you notice yourself getting behind, come talk with me sooner rather than later.

I am very excited to embark on a year of brain-stretching physics madness. With hard work we will all learn and grow from this experience.

Student signature: \_\_\_\_\_ Date: \_\_\_\_\_

Guardian signature: \_\_\_\_\_ Date: \_\_\_\_\_

Guardian name: \_\_\_\_\_ Preferred phone number: \_\_\_\_\_

Guardian's preferred email address: \_\_\_\_\_