

Overview

AP Physics 1 is a year-long course for algebra-based physics. Students will learn and use the appropriate algebra and basic trigonometry concepts as they learn the physics concepts.

Textbook *College Physics*. This is an online textbook that can be accessed with the following link.
[Openstax College Physics Textbook](#). A pdf of the textbook is located in the Welcome Folder on Schoology.

Classroom Techniques

Students will take charge of their own learning in this course. Time in class will be devoted to working together for labs and solving problems on a whiteboard to share solutions with the class. Expect to put in 15-30 minutes out of class each day. You will get out of this class what you choose to put into it.

Main Objectives- (along with topics covered- as required by AP)

1. Analyze problems involving 1D and 2D kinematics; motion graphs, circular and projectile motion
2. Using Newton's 3 Laws, analyze the motion of objects; Newton's 1st, 2nd, and 3rd Laws
3. Use work, energy and power relationships to analyze motion of objects; work, energy, conservation of energy, power
4. Analyze collisions using conservation of linear momentum; impulse, momentum, conservation of momentum, center of mass
5. Analyze the motion of objects that are rotating; rotational kinematics, rotational dynamics, equilibrium, conservation of angular momentum
6. Analyze the motion of objects that are oscillating; simple harmonic motion, pendulums, springs
7. Analyze the motions of objects in orbit; Newton's Law of Gravitation

Course Expectations

1. Come prepared to class **ON TIME** every day with required materials, assignments, and questions ready, and with a great attitude.
2. Respect others, the equipment, and yourself. That means following safety recommendations and washing your hands at the end of class AFTER you have wiped down your desk and anything else you touched in class.
3. Follow all WFHS rules.
4. **Absences:** Absences are a fact of life, but as this is an AP class, we move fast. Try to make up work ahead of any absence if possible. It is **YOUR** responsibility to make up what you have missed ASAP. At the pace we will be going, getting behind is NOT an option, so keep on top of things. The WFPS absence policy will be followed in reference to the 10- day absence rule.
5. **Food and Drink:** No food is allowed in the academic area. Drinks are allowed if they are in a container with a spill-proof lid.
6. **Cell phones:** The WFPS cell phone policy will be enforced. Cell phones are to be put away and silenced during the duration of class time. Infractions will follow the guidelines set forth by the WFPS.

OUT OF SIGHT – OUT OF USE.

Course Resources

1. **Schoology:** All of my notes (PowerPoints) as well as the assignments can be found on Schoology. In addition, there are videos of the worked examples and video reviews for all Quizzitos/exams.
2. **Remind:** This is a text/email-based app that I use to send reminders about quizzes, tests, projects. I may occasionally forget to send out a reminder, but it is **YOUR** responsibility to follow the lesson plans found on Schoology.
For your class, text the following message to **81010**: **Per 1- 42aa7ed**; **Per 2- 6k4kh2**
3. **Online Textbook:** Mentioned above- online textbook.
4. **AP Classroom:** This is where you will do online homework, doing review and taking some practice exams.
Go to **myap.collegeboard.com** and sign up for an account. Add the course code: **Per 1-9VJJQM**; **Per 2- GWDW33**

5. **Classkick:** This is the program we will use to collaborate on whiteboards. Link will be on Schoology.

Course Grading

I will only give credit for **work shown** with correct units on answers. **LATE WORK IS NOT ACCEPTED.** All work for the week is due Sunday night by 11:59pm. Online grades are updated frequently. Please check to make sure that no mistakes have been made. You are expected to be an active participant in this class. There are never any dumb questions or answers. All I ask is that you always try to do your best.

Assignments/Participation (20%)- Considered practice for the exams, but VERY important for you to make sure you know what you are doing.

1. Online assignments (Mostly AP Classroom)
2. Problem of the week- Generally assigned Monday, due Friday. Must be worked out CLEARLY with all steps shown (including any necessary diagrams and listing of concepts)
3. Whiteboard problems are worked on in class in assigned groups. Each set of WB problems will earn you 0, 5, or 10 points depending on how you are participating. **If you are absent on a WB day, you must complete the WB problems (found on Classkick) within 2 days to earn the points.**

Lab Reports/Lab Notebook (30%)- Labs will be hands-on and will occur on average once a week. This will ensure that a minimum of 25% of the instructional time will be spent in the lab. Students will be required to keep copies of their labs in a portfolio. The lab portfolio can be shown to prospective universities for possible lab credit. Students will be required to ask questions, prepare procedures, collect and analyze data, explain sources of error and draw conclusions from mathematical relationships.

* Students will work in groups for labs, but each person is responsible for their own lab report.

Assessments (50%)

1. **Quizzitos**- Students will have short tests (Quizzitos) for each chapter worth 30 points. The Quizzito will be 10 multiple choice (MC) questions and 1 free-response question (FRQ). The questions will be AP level questions. Students will be allowed to use a calculator as well as the AP Exam formula sheet and sheet of constants. Students will have the opportunity to earn up to 10 points back on their Quest.
2. **Unit Exams**-Students will have 2-day unit exams. Day 1 of the Exam will be 22 AP MC and day 2 will be 3 AP FRQs. Students will be able to use the same materials on my exams as are allowed on the AP exam (formula sheet and sheet of constants) to prepare the students for the AP exam conditions. The exams will be scaled like the actual exam. Test corrections will be offered the week after the exams have been taken for a chance to earn up to 1/3 of the points back. **Test corrections will only be allowed IF all assignments have been turned in during the unit.**

Grade scale is one used by all of WFHS and is found in the student handbook

A 90-100% B 80-89% C 70-79% D 60-69% F below 60%

AP Physics Tutorial Schedule:

I will be offering tutorial sessions for AP Physics 1 during WIN sessions (beginning September 19) and on Thursdays (beginning September 8) during period 8 and after school until 4:00 pm. If you attend and complete the work, you will be given credit for an hour of outside tutorial time. These tutorials will focus on topics we are working on and will generally include extra practice.

- AP Physics 1 exam is **Thursday, May 11, 2023**. You will not need to attend class after Friday, May 12, 2023 **IF** you have completed a minimum of **8** hours of outside tutorial time.
- If you are unable to meet these requirements, you will be expected to be in and participate in normal class activities for the remainder of the year.

These opportunities are provided to give you the best chance for success on the AP exams! We look forward to working together through the next year!