



### Required Materials

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- Reference Textbook: *Physics, 4th ed.* by James S. Walker (do not purchase this book; more details to come in class)
- Scientific or Graphing Calculator
- Chromebook or equivalent

### Course Overview

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AP Physics 1 is an algebra-based, introductory college-level physics course. Students cultivate their understanding of physics through classroom study, in-class activity, and hands-on, inquiry-based laboratory work as they explore concepts like systems, fields, force interactions, change, and conservation. By nature, this course is lab-based with special emphasis on inquiry-based quantitative and qualitative methods of analysis. Students are expected to complete all their assigned readings and homework prior to coming to class so they are prepared to participate in class discussions and problem-solving activities. It is critical that you keep up with the pace of the course and ask questions along the way that help you do so.

### Grading

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- Grade Distribution: ▪ 60% Tests ▪ 30% Labs ▪ 10% Daily Work (Homework and Classwork)
- Final Grade Determination: ▪ A = 90% - 100% ▪ B = 80% - 89% ▪ C = 70% - 79% ▪ D = 60% - 69% ▪ F = 0% - 59%
- Late Policy: Late work will not be accepted without Fuller Pass or previous arrangement with Mr. Fuller (2 days per day absence allowed for makeup work)

### Class Format

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Approximately 25% of class time will be dedicated to lab experiences and/or simulations that relate to the topics that are being covered in class. You need to be *in class on time every class day* in order to perform well in this course. **RESPECT, RESPONSIBILITY** and **MATURITY** will guide all classroom behavior. The intensity of this course and the associated labs will require a higher level of maturity and seriousness than a typical high school class. Disruptions and immature behavior may result in your removal from this course.

### Attendance

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Attendance is critical. Your success in this course as well as on the AP exam hinges on your learning the material and it is very difficult to learn when you aren't in class. My website will not have as many resources for AP Physics as it did for AP Chemistry. It will also be very difficult to make up missed labs if you are absent. You are expected to be on time to class with your notebook and calculator, ready to learn. If you are absent, it is your responsibility to make arrangements within one week with Mr. Fuller to make up any missed material including tests, labs, and quizzes. You will have 2 days per day of absence to make up your work as per the student handbook. Tutoring and extra help are available from Mr. Fuller during advisement (Wed and Thur) and access (M, T, W, and F after school).

### Lab Safety

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Lab safety is of the utmost importance since many of the labs in this course will be student-directed, inquiry-based labs. **No food** is allowed in class. Water can be consumed only in the lecture area and must be in a sealed container.

### Lab Writeups

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Each student must keep up with the labs performed throughout the year. Lab write ups must be your own work even if the lab was performed and discussed as a group. Do not fall behind in your lab work! Colleges may request to see your AP labs prior to granting college credit.

### Wrap Up

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In this class, the process is more important than the final answer. You must show all work to receive credit for the answers. This may not appear as explicit directions on a test, quiz, or homework assignment, but it will always be graded this way. The work is worth more than the answer. This is how the AP exam is graded. This means that you can make A's on everything and get all the answers wrong! It also means that you can get all the answers correct and never make an A!

Please ask me for help any time you need it. I will do everything I can to help you succeed in this course *if* you make an effort to succeed. You will be challenged...I promise. But when you finish this course, you will be a better student, far more prepared for college than most of your peers. *And* you will have a strong foundation in the fundamentals of physics.

## Course Content

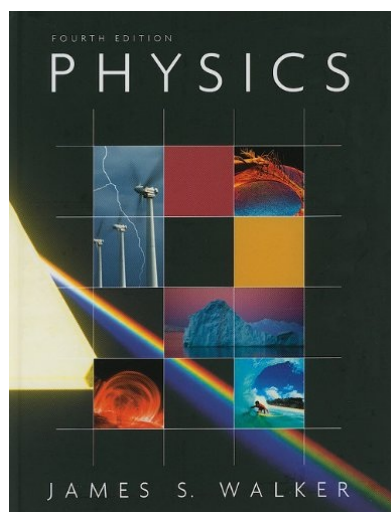
The AP Physics 1 course is organized into 8 units. This class will cover these units with a summative assessment at the end of each unit. The rough timeline for each unit is given below.

Unit	Approximate % of AP Test	Time*
1. Kinematics	10-15%	5 weeks
2. Force and Translational Dynamics	18-23%	6 weeks
3. Work, Energy, and Power	18-23%	5 weeks
4. Linear Momentum	10-15%	3 weeks
5. Torque and Rotational Dynamics	10-15%	4 weeks
6. Energy and Momentum of Rotating Systems	5-8%	3 weeks
7. Oscillations	5-8%	2 weeks
8. Fluids	10-15%	3 weeks

← This unit will be split between the two semesters.

\*All timelines in this table are subject to change.

If you want to purchase a book to use on your own, here is what I recommend:



*Physics* by James S. Walker, 4<sup>th</sup> Edition

ISBN-13: 978-0-321-61111-6 ISBN-10: 0-321-61111-X

I have picked this book and edition because it is fairly easy to find used for very little money (less than \$15, try here: <https://www.gettextbooks.com/>) and it is the same book used in years past so you may be able to get it from a friend that has taken the course. However, you can get any edition of the book and it will have what you need. Just be sure that you are buying the textbook and not just a solution manual or study guide.

Your course fee will **include** a copy of the Princeton Review AP Chemistry Study Guide which will be given to you at the beginning of the year.