



AP Physics 1 Course Syllabus

2017 - 2018

AP PHYSICS 1 COURSE DESCRIPTION

AP Physics 1 is a year long course and is intended to be representative of courses commonly offered in colleges and universities, but it does not necessarily correspond precisely to courses at any particular colleges and universities. Advanced Placement (AP) Physics 1 provides a systematic development of the main principles of physics, emphasizing problem solving and helping students develop a deep understanding of physics concepts. It is assumed that students are familiar with algebra and trigonometry, although some theoretical developments may use basic concepts of calculus. AP Physics 1 provides a foundation in physics for students in life sciences, pre-medicine, and some applied sciences, as well as other fields not directly related to science.



GENERAL INFORMATION

Course: AP Physics 1
Name of instructor: Wendy Chen
Room number: B-24
Website: www.jfkphysics.com
E-mail address: wendy-chen@scusd.edu
Phone number: 916-395-5090 x:506124

CO-REQUISITES:

Math 3 or higher, Precalculus

TEXTBOOKS

Physics, 6th Edition
John D. Cutnell and Kenneth W. Johnson
John Wiley and Son, Inc. c. 2004

MATERIALS NEEDED

binder, scientific calculator, pencils, erasers, and paper. Optional: ruler.

COURSE OBJECTIVES

The aim of the course should be to develop the students' abilities to do the following:

1. Read, understand, and interpret physical information—verbal, mathematical, and graphical
 - a. describe the idealized model to be used in the analysis, including simplifying assumptions where necessary;
 - b. state the concepts or definitions that are applicable;
 - c. specify relevant limitations on applications of these principles;
 - d. carry out and describe the steps of the analysis, verbally or mathematically; and
 - e. interpret the results or conclusions, including discussion of particular cases of special interest
2. Describe and explain the sequence of steps in the analysis of a particular physical phenomenon or problem; that is,
3. Use basic mathematical reasoning—arithmetic, algebraic, geometric, trigonometric, or calculus, where appropriate—in a physical situation problem
4. Perform experiments and interpret the results of observations, including making an assessment of experimental uncertainties
5. Provide students with a college level physics experience.
6. Develop and reinforce strong problem solving and critical thinking skills.
7. Develop and reinforce a collaborative problem solving approach.
8. Develop and reinforce laboratory skills including: questioning, developing an experimental procedure, observing, data collection, and data analysis, including graphical analysis.
9. Develop and reinforce appropriate laboratory safety skills.
10. Develop an understanding of how we experience physics in our everyday lives and of how physics is applied in the “real world”.

EXTRA HELP

Office hours are during lunch or after school. If you plan on stopping by after school for help, please be prompt or let me know ahead of time if you will be late.

ABSENCES

It is your responsibility to check www.jfkphysics.com or with Ms. Chen **before or after school** for work missed. You have the number of days you are absent plus one day to make up the missing work. For example, if you are sick for two days, you have two days plus one day (three total) from the day you return to complete the missing work. If you have missed a lab, you must arrange a time to make up the lab as soon as you return, if you do not do this in a timely manner you will not be allowed to complete the lab and will be given a zero. Unfortunately, demos cannot be made up. Consult a peer if you missed out on an in-class demonstration.

LATE WORK

Unless you have an **excused** absence, late work will not be accepted. No exceptions. All assignments are posted on the class website.

RESTROOM POLICY

Class time is precious, so please try to use the restroom during passing time. No restroom passes will be given the first 10 minutes, last five minutes of class, or during lecture. All students must use the bathroom pass when exiting the room.

TARDIES

You are considered tardy if you are not sitting in your seat when the bell rings.

ACADEMIC DISHONESTY

Allowing someone to copy your answers or copying someone else's answers is a serious offense that will result in a zero for the assignment. Talking during a test or quiz is prohibited and may also result in a zero.

TEXTBOOK HOMEWORK

Homework from the textbook is collected on the due date. I will check for completion even though no points are assigned. Solutions to assignments are posted online after the due date.

PARTICIPATION

Points are awarded based on student involvement in the class. Points are given for being on task and attentive throughout the class period. Activities such as but not limited to: unwarranted cellphone usage, working on assignments for another class, or sleeping will yield zero points for the day.

GRADING POLICY

	Categories	Weighted (%)	Grading Scale (%)	Letter Grade
	Quizzes & Exams	50	[90, 100]	A
	Labs & Activities (including take home)	25	[80, 90)	B
	Final Exam	15	[70, 80)	C
	Classroom Participation & Warm up	10	[60, 70)	D
	Textbook Homework (see above for more info)	0	[0, 60)	F

Your grade in the class is determined by YOU. Teachers do not "give" grades, we simply tally up the points.

COURSE ACTIVITIES AND ASSESSMENTS

The physics course covers physics concepts, applications of mathematics to scientific principles and laboratory work. Assessment needs to evaluate student progress in all these areas. Methods of assessment include:

1. Pre-laboratory and laboratory write-ups.
2. Performance assessment in the laboratory
 - (informally) observing student activities during laboratory investigations.
 - (formally) assessing with practical exams on specific laboratory procedures.
3. Unit tests and quizzes that include essay and short answer questions on concepts as well as mathematical applications.
4. Class participation.
5. Projects that demonstrate the use of physics principles in practical applications.
6. Portfolios that contain a diverse sampling of the student's best work for the year.

UNITS COVERED

For a detailed list of topics covered in this course, [click here](#) or copy and paste the following address into a web browser:

<http://media.collegeboard.com/digitalServices/pdf/ap/ap-course-audit/ap-physics-1-sample-syllabus-2-id-1066434v1.pdf>

LABORATORY RULES

For safety purposes, all lab equipment should be used according to directions. Inappropriate use of lab equipment is a serious offense and may result with a zero on the assignment, parental contact, and/or disciplinary action. Further misuse of equipment will result in a written referral.

CLASSROOM RULES

- Comply with all school rules.
- Come to class prepared and ready to learn!
- Respect others and their ideas.
- Be seated quietly when the bell rings.
- Respect classroom equipment.
- Put away and silent personal electronic devices.
- No personal grooming.
- In addition to classroom policies, students are expected to abide by school and district policies.