



AP Physics C

Course Syllabus

Instructor

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Location

Room 402

Office Hours

Tutoring

Daily, before and after school

Conferences

By Appointment

Before or after school or during

8th period (2:30-3:55 on B

days)

Course Overview

AP Physics C is designed to be equivalent to a year-long, calculus based introductory college level physics course. More specifically, the course is an introduction to classical mechanics (Fall semester) and electromagnetism (Spring semester).

Text

OpenStax University Physics, University Physics Volume 1. OpenStax CNX. Jul 11, 2018 <http://cnx.org/contents/d50f6e32-0fda-46ef-a362-9bd36ca7c97d@10.18>

OpenStax University Physics, University Physics Volume 2. OpenStax CNX. Jul 11, 2018 <http://cnx.org/contents/7a0f9770-1c44-4acd-9920-1cd9a99f2a1e@9.9>.

Course Materials

Course materials will be available through the district's LMS Schoology, which includes homework and class assignments, instructional videos, reviews, assessments and other resources.

AP Exam

ALL students are **REQUIRED** to take the AP exam, per the AP contract, at the end of the year which will test both conceptual and quantitative knowledge of the content covered. AP Physics C consists of 2 separate exams which are 90 minutes each and given back to back on the same day. The two exams are AP Physics C: Mechanics and AP Physics C: E&M which correspond to the Fall and Spring semesters of the college level class.

Class Supplies

1. You will need to keep a class notebook and some colleges may ask to see your notebook to award credit for the lab component of the course. You have several options. 1 – Keep a single notebook with all of your notes, examples and labs. 2 – Keep two separate notebooks, one with notes and practice and one with labs. 3 – Keep an electronic notebook such as OneNote with everything.

My recommendation would be option 1, however you must be well organized and label everything including creating a table of contents. Refer to the lab notebook setup directions in CourseSites.

2. You are free to use pen or pencil in class.
3. Although not required, we will be using team whiteboards extensively in class and dry erase markers run out quickly so you may want to have your own set to use.

Class Expectations

All students are expected to be time, be prepared, and be engaged. Our time together in class is limited and the class is fast paced so it is imperative that everyone be ready to go every day when the bell rings.

In addition, I expect every student to put their best effort into everything we do. The material we cover is difficult and ALL students will struggle at one time or another. What's most important, though, is that we keep on trying. If you try, you will learn...it just may take a little while longer than what you are accustomed to.

Classroom Management Plan

If a student is not meeting the classroom expectations, the following actions will be taken:

1. Verbal warning
2. Written warning
3. Loss of privileges
4. Parent conference
5. An administrative referral

Course Schedule (Subject to Change)

Week	Week of	Subject
Week 1.1	8/13/2018	0 - Introduction
		1 – Concepts of Motion
Week 1.2	8/20/2018	2 – Kinematics in 1-D
Week 1.3	8/27/2018	3 – Vectors and Coordinate Systems
		4 – Kinematics in 2-D
Summative Assessment 1		
Week 1.4	9/4/2018	5 – Force and Motion
Week 1.5	9/10/2018	
Week 1.6	9/17/2018	6 – Motion Along a Line
Week 1.7	9/24/2018	7 – Newton's Third Law
Summative Assessment 2		
Week 1.8	10/1/2018	9 – Work and Kinetic Energy

Week	Week of	Subject
Week 1.9	10/9/2018	
Week 2.1	10/15/2018	10 – Interactions and Potential Energy
Week 2.2	10/22/2018	11 – Impulse and Momentum
Summative Assessment 3		
Week 2.3	10/29/2018	8 – Motion in a Plane
Week 2.4	11/5/2018	12 – Rotation of a Rigid Body
Week 2.5	11/13/2018	
Summative Assessment 4		
Week 2.6	11/26/2018	13 – Newton’s Theory of Gravity
Week 2.7	12/3/2018	15 - Oscillations
Week 2.8	12/10/2018	
Summative Assessment 5		
Week 2.9	12/17/2018	Fall Final – Mock AP Exam
Week 3.1	1/9/2018	22 – Electric Charges and Forces
Week 3.2	1/14/2018	23 – The Electric Field
Week 3.3	1/22/2018	24 – Gauss’s Law
Week 3.4	1/28/2018	25 – The Electric Potential
Week 3.5	2/4/2018	26 – Potential and Field
Summative Assessment 6		
Week 3.6	2/11/2018	27 – Current and Resistance
Week 3.7	2/19/2018	
Week 3.8	2/25/2018	28 – Fundamentals of Circuits
Week 3.9	3/4/2018	
Summative Assessment 7		
Week 4.1	3/18/2018	29 – The Magnetic Field
Week 4.2	3/25/2018	30 – Electromagnetic Induction
Week 4.3	4/1/2018	31 – Electromagnetic Fields and Waves
Summative Assessment 8		
Week 4.4	4/8/2018	Mock AP Exam 1

Week	Week of	Subject
Week 4.5	4/15/2018	AP Exam Review
Week 4.6	4/22/2018	Mock AP Exam 2
Week 4.7	5/29/2018	AP Exam Review
Week 4.8	5/6/2018	Mock AP Exam 3
Week 4.9	5/13/2018	AP Exam – May 14th, noon

Grading

Students will receive grades on the following:

Quizzes (50%) – There are two types of quizzes you will have during the year. The first are topic based and are announced in advance and count twice in the gradebook. These will take place every 2-3 weeks. There will also be more frequent unannounced quizzes based on what we have done over the previous class or two. This will take place at the beginning of class and will vary in format, i.e. short multiple choice, board presentations, group problem solving, and notebook checks (see Learning Activities) and each of these will count once.

Exams and Projects (50%) – You will have a cumulative summative exam every 4-6 weeks. Although the focus will be on the most recent topics, everything covered up to that point is eligible to be included on the exam. In addition, you will be completing various projects throughout the year as a table group.

Learning Activities (0%) – You will have multiple types of learning activities throughout the year that will include virtual labs, group discussion questions, traditional practice sets, and video lecture notes to name a few. All of the activities should be completed in your notebook and are intended to prepare you for the assessments. Although they do not count for individual grades, I will periodically perform checks which will count as a pop quiz grade.

Getting Help

All of you are going to struggle at one point or another and it is imperative that you use the support structures that you have to get through those struggles. This includes your table group, additional study groups with friends, and additional instruction from me.

I highly recommend that you form an outside study group to work with on a regular basis and that you see me as soon as you experience any difficulty. Do not let misconceptions or misunderstandings pile up, because at some point it will be too late.

In order to help you out, I am available every day before (8:00 am) and after (until 4:45 or so) school and during lunch on most days.

Course Drops

In order to drop the class a student must complete the following process per school policy:

1. Student/Teacher conference. During this time I will listen to the student's concerns and try to determine a plan that will allow the student to complete the course successfully.
2. Parent/Student/Teacher conference. We will discuss the concerns of the student as well as my assessment of the student's potential to succeed in the course. In addition, we will discuss any previous action plan and make modifications as needed.
3. Administrator approval. The assistant principal in charge of the AP program will review the request and possibly meet with the student and/or parents before approving the drop.

Note: Drops are only allowed during the first 6 weeks of each semester.

Academic Integrity

All students are expected to try their best on all assignments and produce their own work unless it is specified that collaboration is allowed. For instance, while you can receive help on homework assignments, if your idea of "help" is to copy someone else's answers then you are lacking in academic integrity. To help clarify, here are some guidelines:

Homework – help allowed, but you must complete it individually.

In Class Work/Projects – activities will be group based and you are expected to contribute and be part of the team. You will complete most in class work as a group.

Assessments – help is not allowed.

Students that submit someone else's work as their own, attempt to access unauthorized resources, assist other students without permission, or allow others to violate the academic integrity policy will be in violation and subject to disciplinary measures including but not limited to: receiving a zero on the assignment, administrative referral, and being barred from enrolling in subsequent AP Physics courses.