

Cal Poly Pomona, Physics 133

Instructor: Dr. Nina Abramzon	email: nabramzon@csupomona.edu
Office: Building 8 Room 224	Phone: 869-4021
Office Hours: Tue. : 10:00-11:00, 1:30-2:30; Thu. 10:00-11:00; By appointment: Wed 10:00-12:00	
Materials: Text: Fundamentals of Physics, 9th Edition by Halliday, Resnick and Walker i-clicker remote clicker [Required] Buy a "clicker" from the bookstore and register it online at < http://www.iclicker.com/registration/ >	
Class web page: on Blackboard 9: https://bbpilot.csupomona.edu/	

Course Description: This is the third course of a three-quarter, calculus-based introductory sequence in physics. Students will learn basic principles of Electricity and Magnetism.

What This Course Should Accomplish:

My goals are for you to continue developing knowledge and intuition about how the world works, to learn to approach, solve, and understand physics problems on both qualitative and quantitative levels, and to relate classroom physics to the *real world* you live in.

Prerequisites: Math 115 (Calculus II), Physics 131L (General Physics Lab), and a C- or better in Physics 131 (General Physics).

Corequisites: Math 116 (Calculus III) and Physics 133L (General Physics Lab)

Course Organization:

In addition to the traditional presentation of lecture and demonstration material, each lecture will involve a few interactive learning sessions. During these sessions students will work in groups on a specific assigned question and will discuss the results with other students and with the instructors. These questions are meant to challenge you (without worrying about your grade other than your participation in them). They provide a form of continuous self-assessment for you and also give me important feedback.

Grading:

Homework	15%
In class activities:	10%
Midterm Exam 1/ 26/09	20%
Midterm Exam 2/18/09	20%
Final Exam(cumulative) 3/18/09	30%
Extra credit	5%

Homework: Because physics is a very hierarchical subject (later topics cannot be learned without the foundation provided by earlier ones), it is essential that you keep up with the course material. To encourage you to do so, and to provide you with a gauge of how well you understand the material, regular homework sets will be assigned. You may discuss the homework with classmates. The grade will be determined based on one, two, or three problems that I will pick randomly. I will provide you with full solutions to all problems. HW and solutions will be posted on the web site.

In class activities:

In Class Problems: Often there will be in-class problems. The problems are open book, open notes and you may ask the instructor for help. You are encouraged to work with other students.

Concept questions: During lectures, a number of multiple-choice questions (referred to as Concept Questions) will be asked. The Concept Questions are meant to challenge you (without worrying about your grade other than your participation in them). They provide a form of continuous self-assessment for you and also give me important feedback. I will provide you with “answer cards” that you will use every class to answer the in class concept questions. Please have your answer card ready on your desk at the beginning of each class.

Exams: All exams are in class closed book. You are allowed to bring a 3”x5” index card with FORMULAS ONLY to all exams.

1. The first exam will cover chapters 26 – 28 and will last for one class period.
2. The second exam will cover material from chapters 29-32 and will last for one class period.
3. The final is cumulative and will cover chapters 26-34.

Extra credit A maximum of 5 extra credit points will be awarded to students who demonstrate an effort which is not necessarily reflected in their quizzes/hw/exams. Such efforts might include *contributions to class discussions, answering concept questions correctly, or effective use of office hours*. This extra credit is subjective based on my general impression.

Academic Integrity: Every student is expected to be familiar with the university policy on academic integrity. Copying and cheating are serious offenses.

Any student who feels s/he may need an accommodation based on the impact of a disability may contact me privately to discuss your specific needs, or may contact Disable Student Services at 909-869-3333 in room 126 of the University Library to coordinate reasonable accommodations for

students with documented
 Rough Course Schedule PHY 133

Week #	Date	Topic	Reading Due (Halliday, Resnick and Walker)	HW Due
1	1/7	Introduction, Electric Forces and Fields		
	1/9	Electric Forces and Fields	CH 21 Electric Charges, and force	
2	1/14	Electric Forces and Fields	Ch 22 Electric Fields	
	1/16	Gauss's Law	Ch 23 flux and Gauss's law	HW Due
3	1/21	holiday		
	1/23	Gauss's Law		HW Due
4	1/28	Electric Potentials	Ch 24 Electric potentials	
	1/30	First Exam Chapters 21,22,23 (Electric Charges , Electric forces, Electric fields , flux and Gauss's law)		
5	2/4	Capacitance and Capacitors	Ch 25 Capacitance	HW Due
	2/6	Capacitance and Capacitors		
6	2/11	Electric Current, Resistance, and Electrical Power	Ch 26 Current and Resistance	HW Due
	2/13	circuits	Ch 27 Circuits	
7	2/18	circuits		HW Due
	2/20	Second Exam Chapters: 24, 25, 26 (The electric potential, Potential and fields, capacitance, current and resistance, energy and power, circuits)		
8	2/25	Magnetic Forces and Fields	Ch28 Sources of magnetic fields, and magnetic forces	
	2/27	Magnetic Forces and Fields		
9	3/4	Sources of the Magnetic Field	Ch 29 Magntic Fields due to Currents	HW Due
	3/6	Faraday's Law and Lenz's Law	Ch 30 Induction and Inductance	
10	3/11	Faraday's Law and Lenz's Law		
	3/13	Inductance and Review		HW Due
Finals Week	Wed 3/20 1:40-3:40 Final Exam chapters: 21-30 with emphasis on chapters 28 – 30(Magnetic Forces and Fields, Sources of the Magnetic Field, Faraday's Law and Lenz's Law)			

