

## Physics 133H

Fall 2009

**Instructor:** Peter Siegel, Room 8-215, Phone: 869-4029  
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Web page: www.csupomona.edu/~pbsiegel

**Lecture Hours:** Mon, Wed, Fri 1-1:50 in Room 8-241

**Office Hours:** Mon 10-12, Wed 10-11, Fri 10-11 and 2-3

**Textbook:** *Physics for Scientists and Engineers* (Second Edition) by R.D. Knight. There is also a less expensive electronic version. Both book and electronic book come with "Mastering Physics". You can also use any first year "Physics for Scientists and/or Engineers" you want. My lecture notes are also available from a link on my home page.

### Grading:

Homework (Out of 60 points)	12%
First Exam (Oct 12)	26%
Second Exam (Nov 4)	29%
Final Exam (Dec 7)	33%

The formula for calculating the point total is:

$$Points = \frac{HWK}{60}12 + \frac{MID1}{50}26 + \frac{MID2}{50}29 + \frac{FINAL}{60}33 \quad (1)$$

if the midterms are worth 50 points and the final 60.

### Homework:

There are two ways to earn homework credit. You can use any combination of the two, but the maximum total homework points is 60:

a) **My assigned problems:** Homework problems will be assigned **on my Home page** 7 times in the quarter and will be due before the solutions are posted. If I am not in my office when you turn it in, slide it under my door. Homework turned in on time will receive a score out of 10 points. The solutions will be posted on my home

page after the due date. The best six scores will be included in the homework grade, so 60 points is the maximum.

b) **Mastering Physics:** Go to the Mastering Physics website "www.masteringphysics.com". My class code is **MPSIEGEL02856**. I post nearly every problem that is available, and you can do any problem for points or make-up points until the end of the quarter. i.e. you could do any 60 problems correctly on Mastering Physics for 60 homework points.

**Exams:** The first exam (26%) will be an in-class closed book exam with a formula sheet supplied. It will last for 50 minutes. The second exam will also be a closed book (formula sheet supplied) exam, and will last for 50 minutes. (29%). The final will be similar in format to the midterms (33%).

The time for the final is Monday, December 7, from 9:10 - 11:10.

**Note:** An unexcused absence for one of the midterms will result in a score of 1/2 times what you received on the other midterm. Missing the final exam will result in a grade of F or UW.

### Rough Course Outline Phy133H Fall 2009 (Siegel)

Day	Topic
Fri Sept 25	Introduction, Electric Charge
Mon 28 Wed 30 Fri Oct 2	Coulomb's Law, Superposition Principle Electric Field Superposition of Electric Fields, Flux <b>Hwk Due</b>
Mon 5 Wed 7 Fri 9	Gauss's Law Applications of Gauss's Law Electric Potential <b>Hwk Due</b>
Mon 12 Wed 14 Fri 16	<b>First Exam</b> Capacitance Combinations of Capacitors, Examples
Mon 19 Wed 21 Fri 23	Energy stored in a Capacitor and Field Current, Resistance, Ohm's Law Electric Power <b>Hwk Due</b>
Mon 26 Wed 28 Fri 30	Resistors in Series and Parallel Kirchoff's Law's Examples using Circuits
Mon Nov 2 Wed 4 Fri 6	RC Circuits <b>Hwk Due</b> <b>Second Exam</b> Magnets and Magnetic Field
Mon 9 Wed 11 Fri 13	Biot-Savart Law <b>Holiday Yippee: Veteran's Day</b> Ampere's Law
Mon 16 Wed 18 Fri 20	Static Magnetic Field Examples <b>Hwk Due</b> Magnetic Force Magnetic Force Examples, Faraday's Law
Mon 23 Wed 25 Fri 27	Examples of Faraday's Law Lenz's Law, Inductance <b>Hwk Due</b> <b>Holiday Yippee: Thanksgiving</b>
Mon 30 Wed Dec 2 Fri 4	Self Inductance, RL Circuits Energy in the Magnetic Field Displacement Current <b>Hwk Due</b>
Mon Dec 7	9:10 - 11:10 <b>Final Exam</b>