

Winter 1999

DEPARTMENT OF PHYSICS  
PHYSICS 2B(a): Electricity and Magnetism

January 4, 1999

Web page: <http://www-physics.ucsd.edu/teaching/1999W/2B/>

**INSTRUCTOR:** Benjamin Grinstein, 5210 Mayer Hall, Ext. 534-5229  
Office Hours: Tuesday, 2:00-3:30 p.m.

**COURSE COORDINATOR:** Patti Hey, 118 Urey Addition, 822-1468

**TEACHING ASSISTANT:** Dave Evans, [daevans@physics.ucsd.edu](mailto:daevans@physics.ucsd.edu), x40390,  
Urey Hall 7257

**COURSE SCHEDULE:**

Lectures:	MW	11:15-12:05 PM	WLH 2001
	Tu	4:40-5:30 PM	CENTER 101
Quiz:	F	11:15-12:05 PM	WLH 2001
Discussion Sections:	W	2:30-3:20 PM	PETER 104
	Th	5:45-6:35 PM	CSB 002
Problem Session:	Th	7:00-8:50 PM	YORK 2622

**TEXT:** Haliday, Resnick & Walker, *Fundamentals of Physics*, 5th Edition (Wiley, 1997)

**COURSE FORMAT:**

This is the second quarter of a four-quarter introductory physics sequence. The course is aimed at students majoring in science and engineering (e.g., biology, chemistry, computer science, mathematics, pre-med.).

**Prerequisites:** Physics 2A and Math 20B, or equivalent, and concurrent enrollment in Math 20C or 21C. Calculus will be used extensively.

**Discussion Sections:**

These sections focus on understanding of theory and methodology, as well as problem solving. You are advised to attend these sections and to make them successful by actively participating.

**Problem Sections:**

These sections focus on problem solving, in preparation for the quiz. You are encouraged to attend and ask questions on homework problems as well as on lecture material.

**HOMEWORK ASSIGNMENTS:**

Problems from the textbook are assigned for each chapter (see below), and solutions will be posted on the web page. To fully understand the material, you should work most of the problems **on your own** without help of the solution key. Homework will not be graded.

**QUIZZES:** Weekly closed-book quizzes will be given on Friday in accordance with the schedule given in the Course Schedule. Solutions will be posted on the web.

1. At the first quiz, you will be assigned a code number. This number will be your code number for the session and will be used on each quiz thereafter in place of your name. Quizzes will be available for pickup at WLH 2126 soon as they are corrected and recorded. Staffing hours will be announced in class the first week of the quarter. Recorded grades will be posted by the code number in the glass cases at WLH. Check your posted grade against what is on your quiz to be sure your grade has been recorded correctly.
2. Any appeal to the grading of quizzes should be made in writing to the Grader, within one week of the return of that quiz. **Do not** write directly on the quiz. Instead, attach a sheet of paper an explanation for why you are appealing the grade (be specific). Other than for incorrect addition of points, re-grades will only be considered for quizzes written in pen (not pencil).

3. Your overall quiz grade will be computed from the best 6 of the 8 quizzes and will count 50% toward the final grade. Two of the quizzes can therefore be used for absences without penalty.

4. **There will be no make-up quizzes.** If you anticipate missing more than two quizzes due to unavoidable circumstances, you must discuss this with the instructor **beforehand**.

**FINAL EXAM:** The final will be a closed-book exam and cover **all** course material. It will be given on Monday, March 15, 11:30-2:30 p.m., location to be announced. Your student I.D. is required to take it.

**COURSE GRADE:**

Quizzes	50%	(best 6 of 8)
Final Exam	50%	

**ACADEMIC DISHONESTY:**

Please read "UCSD Policy on Integrity of Scholarship" on pages 71-74 of the 1998-99 UCSD General Catalog. These rules will be rigorously enforced.

**ADD/DROP PROCEDURE:**

Use TeSS to add/change/drop, drop from waitlists. **No add/drop cards will be signed by the instructor or TA.**

Last day to: Add.....Friday, January 15, 1999  
Drop without "W" on transcript.....Friday, January 29, 1999  
Drop with "W" on transcript.....Friday, March 5, 1999



**No drops allowed after Friday, March 5, 1999**

**WHOM TO SEE:**

Patti Hey, 118 Urey Hall Annex, Physics Dept. Student Affairs Office, if you have any trouble using TeSS to add/change/drop, drop from waitlists.

The Teaching Assistant or the Grader if you have questions relating to problem solving methods or to grades received.

The Instructor, if you have basic questions about the subject matter, or if you have administrative problems.

**COURSE SCHEDULE**

Week	Topics (Chapters)	Quiz Chapters
1: Jan. 4	Electric charge and field (22,23)	<b>No quiz</b>
2: Jan. 11	Gauss' law (24) Electric Potential (25)	Ch. 22-24
3: Jan. 18	Electric potential, capacitance (25, 26)	Ch. 25,26
4: Jan. 25	Current and resistance (27)	Ch.26, 27
5: Feb. 1	Circuits (28)	Ch. 28
6: Feb. 8	Magnetic fields, currents (29, 30)	Ch. 29, 30
7: Feb. 15	Faraday's Law, inductance (31)	Ch. 31
8: Feb. 22	Alternating currents (33)	Ch. 33
9: Mar. 1	Maxwell's equations (32)	<b>No quiz</b>
10:Mar. 8	Electromagnetic waves (34)	Ch. 32, 34

**Note: Two Mondays (January 18 and February 15) are holidays.**