

DEPARTMENT OF PHYSICS

Spring 2010

Physics 1B

March 29, 2010

General Physics – Electricity & Magnetism (Lecture)

Web page: <http://physics.ucsd.edu/students/courses/spring2010/physics1b/>

INSTRUCTOR: Dr. José N. Onuchic jonuchic@ucsd.edu
Office: 7226 Urey Hall
Office Hours: to be determined.
Phone: 534-7067

COURSE COORDINATOR: Patti Hey, 118 Urey Hall Addition, 822-1468,
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TEACHING ASSISTANT: Chang Feng c1feng@physics.ucsd.edu
Office Hours: to be determined

CLASS SCHEDULE:

Lectures: MWF 9:00 – 9:50 a.m. York2722

Quizzes: Fri., Apr. 9th Fri., Apr. 23rd Fri., May 7th Fri., May 21st

Problem Sessions: Thursdays before quiz 8:00 p.m. – 9:20 p.m. location TBA

Labs: Once a week for 9 weeks starting the week of April 5th. Note that the lab is a completely separate course with a different instructor.

Final Exam: Wednesday, June 9, 8:00 a.m.– 11:00 a.m., location TBA

Final Examination: The final examination will cover all of the material of the course. **Please check your final exam schedule. STUDENTS ARE REQUIRED TO TAKE THE FINAL AT THE SCHEDULED TIME.**

TEXT: Serway and Faughn, College Physics, 7th Edition, Vol. 2, Thomson/Brooks/Cole

PREREQUISITES: Math 10B, concurrent in 10C or 20B. Trigonometry, vectors, and calculus will be used in lectures, problem sets and exams.

Help Is Available: Problem sessions will be held every other Thursday evening. At these sessions, problems will be worked out and the weekly lectures gone over. Attendance is voluntary, but students are encouraged to use these meetings to help master course material and prepare for quizzes. Individual assistance is available during office hours. **The Physics Dept. tutorial center (location 2702 Mayer Hall) is also open Sunday-Thursday from 3-8 p.m.**

Academic Dishonesty: Please read “UC Policy on Integrity of Scholarship” in the UCSD General Catalog.

COURSE FORMAT: Physics 1 A-B-C is a lecture course covering mechanics, electricity and magnetism, waves and modern physics. This sequence is not suitable for students majoring in Physics, MAE, ECE or CSE. Other majors should check with their departments for the appropriate sequence. Physics 1B deals with electricity and magnetism. The course schedule follows. A laboratory meeting each week will give hands-on experience of the physical concepts dealt with in the course. Concurrent enrollment in the 1B lab is required. Lab information can be found at: <http://physics.ucsd.edu/students/courses/spring2009/physics1labs/>. In addition, lab instructor Dr. Michael Anderson will be spending about 10 minutes discussing lab details during the first 1B course lecture on March 29.

Homework Assignments: Problem sets are assigned as selections from each text chapter. Solutions will be available on the course web site. Some problems will be worked in detail during the problem session. The homework will not be graded, but exam problems may resemble homework that is assigned.

Quizzes: Problem quizzes will be given beginning the 2nd week (Apr. 9th, Apr. 23rd, May 7th, and May 21st). Your lowest quiz score will be dropped. **There will be no make-up quizzes. You must purchase your own scantron form for quizzes (No. X101864-PAR). They are available at the Bookstore and the general store co-op for \$0.15 each. You will need a No. 2 pencil to fill in the scantron.** At the first quiz you will be assigned a quiz code number. This number is yours for the rest of the quarter. You have to put your proper quiz code number on every quiz and the final. When results of exams are posted on-line, they will be listed by quiz code number.

Grading Policy:

Quizzes	60%	(Determined by your top three quiz scores)
Final Exam	40%	

Add/Drop: Use WebReg to add/change/drop, drop from waitlists. See Sharmila Poddar (534-3290; <spoddar@physics.ucsd.edu>) in the Physics Department, Student Affairs Office, Urey Hall Addition, Room 115, if you have any problems with WebReg. If you need advice, see the TA or the instructor, **but they do not sign any cards.**

Add/Drop Deadlines:

Add	Friday, April 9th
Drop without 'W' on transcript	Friday, April 23rd
Drop with 'W' on transcript	Friday, May 28th

PHYSICS 1B TENTATIVE COURSE SCHEDULE

Week	Date		Topics	Lecture
1	Mar. 29	M	Introduction, Electric Charge	15A
	Mar. 31	W	Coulomb's Law	15B
	Apr. 2	F	Electric Field	15C
2	Apr. 5	M	Gauss's Law	15D
	Apr. 7	W	Electric Potential	16A
	Apr. 9	F	Quiz 1 (Ch 15)	
3	Apr. 12	M	Equipotential Surfaces	16B
	Apr. 14	W	Capacitance	16C
	Apr. 16	F	Capacitors	16D
4	Apr. 19	M	Electric Current	17A
	Apr. 21	W	Resistance and Ohm's Law	17B
	Apr. 23	F	Quiz 2 (Ch 16)	
5	Apr. 26	M	Resistors	18A
	Apr. 28	W	Kirchhoff's Rules	18B
	Apr. 30	F	RC Circuits	18C
6	May 3	M	Practical Circuits	18D
	May 5	W	Magnets	19A
	May 7	F	Quiz 3 (Ch 17 & 18)	
7	May 10	M	Magnetic Forces	19B
	May 12	W	Charged Particles in a Magnetic Field	19C
	May 14	F	Magnetic Fields	19D
8	May 17	M	Induced EMF	20A
	May 19	W	Faraday's Law and Lenz's Law	20B
	May 21	F	Quiz 4 (Ch 19)	
9	May 24	M	Self Inductance and Inductors	20C
	May 26	W	Self Inductance and Inductors	20D
	May 28	F	AC Circuits	21A
10	May. 31	M	UNIVERSITY HOLIDAY	
	Jun. 2	W	Electromagnetic Waves	21B
	Jun. 4	F	Class Review	