DEPARTMENT OF PHYSICS

Spring2010 **Physics 1C** **March 28, 2010**

Web page: http://physics.ucsd.edu/students/courses/spring2010/physics1cb/

INSTRUCTOR: Professor Herbert Levine (hlevine@ucsd.edu)
Office: 7230 Urey Hall
Office Hours: Monday 12-1, Thursday 1-2
Phone: 534-4844

COURSE COORDINATOR: Patti Hey, 118 Urey Hall Addition, 822-1468, plhey@physics.ucsd.edu

1C TEACHING ASSISTANT: Joseph Graves

Office Hour:s TBA

CLASS SCHEDULE:

Lectures:	MWF	2:00 – 2:50 PM	YORK 2722
Quizzes:	F	2:00 – 2:50 PM	
Problem Session:	W	8:00 – 9:20 PM	HSS 2250 (Ledden Auditorium)

Labs: Once a week for 10 weeks. . For questions re: the labs, please contact the lab instructor

Final Exam: Friday, June 11, location to be announced.

TEXT: Serway/Faughn, College Physics, 7th Edition, Thomson/Brooks/Cole

(This is a special custom-bind paperback bundle printed exclusively for UCSD)

PREREQUISITES: Physics 1B, 1BL, Mathematics 10C or 10D or 20C. **Concurrent enrollment in Physics 1CL.**

COURSE FORMAT: Physics 1A-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 1C deals with Waves, Optics and Modern Physics. Concurrent enrolment in the 1C lab is required. Lab information can he found at http://www-physics.ucsd.edu/students/courses/spring2010/.

HELP IS AVAILABLE: A problem session will be held on Wednesday evenings during quiz weeks. At these sessions the TA will work problems and go over the weekly lectures. 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.

HOMEWORK ASSIGNMENTS: Problem sets are assigned as selections from each text chapter. Solutions will be available on the course web site. The problems will be worked in detail during the Wedenesday problem session. The homework will not be graded, but problems in the quiz may resemble homework assigned for the week.

QUIZZES: Quizzes will be given roughly every other week, beginning the second week. **Note that quiz dates are all Fridays!** The overall quiz grade will be computed from the best 4 quizzes out of 5 total quizzes. **There will be no make-up quizzes; this is the reason that I allow students to drop 1 quiz. You must purchase your own**

scantron forms 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 3-digit number as your code number, which you will insert along with the course number on the scantron instead of your name. Recorded grades will be posted by the code number on the course website. Check to be sure your grade has been recorded correctly.

FINAL EXAMINATION: The final examination will cover all of the material of the course. **Please check your final exam schedule and inform instructor of any conflicts within the first two weeks of quarter.**

GRADING POLICY	Quizzes	60% (best 4 of 5)
	Final Exam	40%

ADD/DROP

Use WebReg to add/change/drop, drop from waitlists. See Sharmila Poddar (534-3290) in the Physics Department, Student Affairs Office, if you have problems with WebReg. If you need advice, see the TA or the instructor, **but they <u>do not</u> sign any cards.**

ADD/DROP DEADLINES

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

ACADEMIC DISHONESTY: Please read "UC Policy on Integrity of Scholarship" in the UCSD General Catalog.

APPROXIMATE LECTURE SCHEDULE

Week	Date	Topic	Chapter
1	3/29	Review of oscillations	13
	3/31	Waves	
	4/2	Interference, reflection	
2	4/5	Sound	14
	4/7	Standing wave, Doppler shift	
	4/9	**quiz 1 on chaps 13,14**	
3	4/12	What is an EM wave?	21
	4/14	Reflection of light	22
	4/16	Refraction	
4	4/19	Mirrors	23
	4/21	Lenses	
	4/23	**quiz 2 on chaps 21 (part), 22, 23(mirrors)**	
5	4/26	Lenses	
	4/28	Optical Instruments	25
	4/30	Double-slit experiment	24
6	5/3	Diffraction	
	5/5	Diffraction grating, polarization	
	5/7	**quiz 3 on Chaps 23 (lenses), 24, 25**	
7	5/10	resolution, interferometers	
	5/12	X-ray diffraction, photoelectric effect	27
	5/14	Compton effect	
8	5/17	de Broglie waves	
	5/19	Uncertainty principle	
	5/21	**quiz 4 on Chaps 27**	
9	5/24	Bohr atom	28
	5/26	Atomic physics; lasers	
	5/28	spin, MRI	
10	5/31	no class	
	6/2	energy-mass relationship, nuclear energy	29
	6/4	**quiz 5 on Chap 28,29**	