

## DEPARTMENT OF PHYSICS

Spring 2014

Physics 1C

March 30, 2014

General Physics – Modern Physics (Lecture and Laboratory)

Web page: <http://www.t2.ucsd.edu/twiki2/bin/view/UCSDTier2/Physics1CSpring2014>

**INSTRUCTOR:** Prof. Frank Würthwein [fkw@ucsd.edu](mailto:fkw@ucsd.edu)  
Office: 5515 Mayer Hall Addition  
Office Hours: M 1:30-2:30 p.m.  
Phone: 822 3219

**COURSE COORDINATOR:** Patti Hey, 2571 Mayer Hall Addition, 822-1468,  
[plhey@physics.ucsd.edu](mailto:plhey@physics.ucsd.edu)

**1C TEACHING ASSISTANT:** Song-Mao Liao [sliao@physics.ucsd.edu](mailto:sliao@physics.ucsd.edu)  
**Office Hours:** M 5-8pm MHA 2702

**CLASS SCHEDULE:**

*Lectures:* 1C MWF 3:00 – 3:50 p.m. 2722 York Hall

*Quizzes:* Four in class quizzes on Wednesdays April 9<sup>th</sup>, 23<sup>rd</sup>, May 14<sup>th</sup>, June 4<sup>th</sup>

*Problem Sessions:* Tuesdays 7:00 p.m. – 8:50 p.m. WLH 2005

*Final Exam:* 1C Wednesday, June 11, 3p.m. – 6p.m., location TBA

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

**TEXT:** Serway and Jewett, Principles of Physics, 5<sup>th</sup> Edition, Brooks/Cole CENGAGE Learning

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

**Help Is Available:** Problem solving sessions will be held on Tuesday 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 Addition) is also open Sunday-Thursday from 3-8 p.m.**

**Acad. 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 1C deals with modern physics. A laboratory meeting each week will give hands-on experience of the physical concepts dealt with in the course.
- HW 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 problem session. The homework will not be graded, but exam problems may resemble homework that is assigned.
- Quizzes:** Quizzes will be given on Wednesdays April 9<sup>th</sup>, 23<sup>rd</sup>, May 14<sup>th</sup>, June 4<sup>th</sup>. **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% |
| 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, Mayer Hall Addition, Room 2561, if you have any problems with WebReg. If you need advice, see the TA or the instructor, **but they do not sign any cards.**

## PHYSICS 1C TENTATIVE COURSE SCHEDULE

Week	Date		Topics	Lecture
1	Mar. 31	M	Introduction	12A
	Apr. 2	W	Spring & Pendulum	12B
	Apr. 4	F	Waves	12C
2	Apr. 7	M	Sound	13A
	Apr. 9	W	<b>Quiz 1 (Ch.12 &amp; 13)</b>	
	Apr. 11	F	Doppler Effect	13B
3	Apr. 14	M	Standing Waves	14A
	Apr. 16	W	Double-Slit Interference	27A
	Apr. 18	F	Single-Slit Interference	27B
4	Apr. 21	M	Diffraction	27C
	Apr. 23	W	<b>Quiz 2 (Ch 14 &amp; 27)</b>	
	Apr. 25	F	EM Waves	24A
5	Apr. 28	M	Light	25A
	Apr. 30	W	Reflection and Refraction	25B
	May 2	F	Total Internal Reflection	25C
6	May 5	M	Mirrors	26A
	May 7	W	Lenses and Geometric Optics	26B
	May 9	F	Microscopes & Telescopes	
7	May 12	M	Photoelectric Effect	28A
	May 14	W	<b>Quiz 3 (Ch 21 &amp; 22 &amp; 23)</b>	
	May 16	F	Wave-Particle Duality	28B
8	May 19	M	Uncertainty Principle	28C
	May 21	W	Bohr Atom	29A
	May 23	F	Quantum Numbers	29B
9	May 26	M	<b>UNIVERSITY HOLIDAY</b>	
	May 28	W	The Nucleus	30A
	May 30	F	Radioactivity	30B
10	Jun. 2	M	Particle Physics & Cosmology	31
	Jun. 4	W	<b>Quiz 4 (Ch 25, 27, 28, &amp; 29)</b>	
	Jun. 6	F	Class Review	