

DEPARTMENT OF PHYSICS

Spring 2009

Physics 2C

March 30, 2009

Thermodynamics and Waves

INSTRUCTOR: Professor Melvin Okamura (mokamura@physics.ucsd.edu)
Office: 4517 Mayer Hall
Office Hours: Thu, 2-3 pm and by appointment
Phone: 534-2506

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

2C TEACHING ASSISTANT: Xiang Yang (betterfutureyx@gmail.com)
Office Hours TBA

CLASS SCHEDULE:

Lectures:	MW	3:00 – 3:50 p.m.	WLH 2001
	Tu	8:00 – 8:50 p.m.	Center 101
Weekly Quiz:	F	3:00 – 3:50 p.m.	WLH 2001

Problem Session: TBA

A Clicker will not be used in this course.

FINAL EXAM: Wed, June 10, 2009, 3:00 pm-5:59 pm. (location to be announced)

TEXT: Physics for Scientists and Engineers, Volume III. Richard Wolfson and Jay M. Pasachoff, 3rd Edition 1999. Pearson Addison Wesley Publishing. Custom Edition for UCSD.

PREREQUISITES: Physics 2B, Math 20 C and concurrent enrollment in Math 20D.

COURSE FORMAT: Physics 2C is a lecture course covering waves and thermodynamics. The course consists of three lectures per week on Mon., Tues and Wed. with a quiz usually given on Friday covering the material discussed in the lectures the week.

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 Thursday problem session. The homework will not be graded, but problems in the quiz may resemble homework assigned for the week.

HELP IS AVAILABLE: A problem session will be held on Thursday evening. At the problem session the TA will work problems. 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.

TUTORIALS: Additional help can be obtained from the Physics Department tutorial center (<http://tutorialcenter.ucsd.edu/index.html>) at 2702 Mayer Hall Sunday to Thursday. Check the web page for current hours.

QUIZZES: A weekly quiz will be given on Friday. You can use a calculator and a sheet of equations (8x10 one side). You should bring blank paper for calculations. No computers or cell phones should be used during examinations. There will be no quizzes on the 1st and 9th weeks. The overall quiz grade will be computed from the

best 6 quizzes out of 8 total quizzes. Two of the quizzes can therefore be used for absences without penalty. **There will be no make-up quiz; this is the reason that I allow students to drop 2 quizzes.** 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 quiz answer sheet instead of your name. The format of the quizzes will be scantron graded multiple-choice questions. You will need to bring a scantron examination sheet that is available at the bookstore. No. 101864-PAR. Quiz grades will be posted by code number on the course web page. Questions about quiz grades should be made in writing to the teaching assistant within one week of posting of the grade.

FINAL EXAMINATION: The final examination will be closed book and cover all of the material of the course. You will be allowed to bring two sheets of equations to the exam. It will be given Wed, June 10, 3:00 pm -5:59 pm, location to be announced.

GRADING POLICY	Quizzes	60% (best 6 of 8)
	Final Exam	40%

ADD/DROP

Use StudentLink to add/change/drop, drop from waitlists. See Sharmila Poddar, spoddar@physics.ucsd.edu in the Physics Department, Student Affairs Office, Urey Hall Addition, if you have problems with StudentLink. If you need advice, see the TA or the instructor, **but they do not sign any cards.**

ADD/DROP DEADLINES

Last day to add a class: Friday, April 10

Last day to drop a class w/o a W and change grade option: Friday, April 24

Last day to drop a class w/o an F: Friday, May 29

ACADEMIC DISHONESTY: Please read "UCSD Policy on Integrity of Scholarship" in the 2006-2007 UCSD General Catalog.

CLASS SCHEDULE (tentative) Text: Wolfson and Pasachoff 3rd Ed. Addison Wesley

Homework assignments will be posted on the web page.

No quizzes in the 1st and 9th week ,Mon , May 28 is a Holiday (Memorial Day).

week	date	topic	chapter
1	3/30	Waves	16
	4/1	Waves-Mathematical description	16
	4/2	Waves- Superposition	16
	4/4	No Quiz	
2	4/6	Sound Waves	17
	4/7	Sound - Standing Waves	17
	4/8	Sound- Doppler Effect	17
	4/10	Quiz	Ch 16,17
3	4/13	EM Waves -Maxwell Equations	34
	4/14	EM Waves - Properties	34
	4/15	EM Waves- Polarization	34
	4/17	Quiz	Ch. 34
4	4/20	Reflection and Transmission	35
	4/21	Refraction	35
	4/22	Reflection and Polarization, Dispersion	35
	4/24	Quiz	Ch. 35
5	4/27	Image Formation- Mirrors	36
	4/28	Image Formation - Lenses	36
	4/29	Image formation – Optical Instruments	36
	5/1	Quiz	Ch. 36
6	5/3	Interference- Double Slit	37
	5/4	Interference- Thin films, Interferometer	37
	5/5	Diffraction – Single slit	37
	5/7	Quiz	Ch. 37
7	5/11	Fluids- Statics	18
	5/12	Fluids- Bouyancy	18
	5/13	Fluids - Dynamics	18
	5/15	Quiz	Ch 18
8	5/18	Temperature and Heat	19
	5/19	Heat Transfer	19
	5/20	Thermal Behavior of Matter	20
	5/22	Quiz	Ch 19, 20
9	5/25	Holiday	
	5/26	First Law of Thermodynamics	21
	5/27	Thermodynamic Processes	21
	5/29	No Quiz	
10	6/1	Second Law of Thermodynamics	22
	6/2	Applications, Entropy	22
	6/3	Energy and Society	
	6/5	Quiz	Ch 21, 22