

PHYSICS 244
WINTER QUARTER 2007

LECTURE - In general, the lectures will be designed to supplement as well as help clarify material covered in the text. To derive maximum benefit from the lectures you should read the assigned material beforehand and try to answer two questions - what new quantities are being defined and what are the main points being stressed?. Attendance is expected!

RECITATION - The recitation class is scheduled in order that you may receive more individualized attention to questions that may arise than is possible in the lecture. The meetings will be conducted on a "give and take" basis, and you are expected to participate actively in the discussions that arise. Additionally you should work on all of the assigned study exercises for each class period before coming to class. You will find that a much greater benefit will be derived from the discussions if you have a reasonable familiarity with the material to be covered.

HOMEWORK: Weekly homework assignments are listed in the schedule. Your solutions, neatly written and carefully showing how you arrived at your results should be submitted as part of your assignment at the start of the Recitation class meeting. The lowest homework grade out of those collected will be dropped. Therefore, there will be no late homework accepted. All of the pages should be stapled together so they do not become separated in the grading process. You may also submit your homework assignment before the start of class to a secretary in the Physics Dept. Office (#248 Fawcett). Homework assignments should never be slid under office doors because they get lost that way.

LABORATORY - The laboratory is a very important part of physics since experimentation is the ultimate source of all our knowledge about our environment. The experiments you will perform were chosen with an eye toward giving you the "flavor" of the experimental method as well as to supplement the lectures.

EXAMINATIONS - Two exams and a final will be given during the quarter.

<u>GRADING</u> -	First Hourly Exam	100 points	
	Second Hourly Exam	100 points	
	Third Hourly Exam	100 points	(Given along with Final)
	Comprehensive part of final	100 points	
	Homework	100 points	
	Total	500 points	

The Final Exam consists of the last hourly exam and a comprehensive exam. If for a documented serious reason you miss an examination, you may request special permission to take a make-up examination. At the end of the quarter as grades are being assigned, it is always found that a number of students fall near the "break points" between grades. For the students who fall close to these points, recommendations of the recitation instructor (which will include attendance and class participation) and a careful analysis of the final examination will be used as a guide in the assignment of the letter grade.

An expected distribution of grades for the final averaged total scores is given below. I however reserve the right to modify this grade distribution to better suit the distribution of scores from the class.

100% --- **A** --- 85% --- **B** --- 70% --- **C** --- 55% --- **D** --- 40% --- **F** -- 0

GENERAL COMMENTS - Solutions to the homework will be posted on line after the last recitation of the week. If you have difficulties with the material you are urged to seek help (sooner rather than later). You can go to the lecturer, recitation instructor, help room (location and times TBD), or another student; in any case the ultimate responsibility for understanding the material is the student's.

Book: *Physics for Scientists and Engineers, vol 6, by Serway & Jewitt*

TOPICS COVERED:

- **Mechanical oscillations, oscillatory motion**
- **Wave Motion**
- **Sound Waves**
- **Superposition, Interference and Standing Waves**
- **Electromagnetic Waves**
- **Geometrical Optics**
- **Image formation**
- **Physical Optics: Interference, Diffraction, and Polarization**
- **Thermodynamics**
 - **Temperature**
 - **First Law of Thermodynamics**
 - **Kinetic Theory**
 - **Second Law of Thermodynamics**
- **Selected Topics: Fluid mechanics and Gravity**

TENTATIVE SCHEDULE FOR PHYSICS 244 WINTER QUARTER 2007

MONDAY	WEDNESDAY	Homework Assignment
	1/3 Chapter 15 Mechanical Oscillations	
1/8 Chapter 16&18 Wave Motion	1/10 Chapter 17 Sound and Chap 18	Chap 15-4,5,8, 10,18,19, 33,71 Chap 16-3,8,14
1/15 Holiday	1/17 Chapter 17 Sound and Chap 18	Chap 16-18,26, 33,41,52 Chap 17-32,37,39,40
1/22 Chap 18	1/25 Chapter 34 Chapter 35	Chap 18-8,9,16,22,43,44,52
1/29 Exam 1 (Chap 15-18)	1/31 Chapter 36	Chap 35- 17,18, 20,23, 30, 36,56
2/5 Chapter 37 Interference	2/7 Chapter 37 Chapter 38	Chap 36- 12,14,16,30,34,37,55,62 Chap 37- 8,10
2/12 Chapter 38	2/14 Chapter 19 Temperature	Chap 37-34,42,64 Chap 38-6,18,32,33,36,42
2/19 Exam 2 (chap 35-38)	2/21 Chapter 20 First Law	Chap 19- 22,32, 47,50, 54, 55
2/26 Chap 21 Kinetic Theory	2/28 Chapter 22 Second Law	Chap 20-6,18,32,39,43 Chap 21- 18, 22,32,34
3/5 Chapter 14 Fluids	3/7 Chap 13 Gravity	Chap 22- 8,11, 31,35, 46,54 Chap 14- 14,27,39,55,71
3/12 Closing remarks		

THE FINAL EXAM IS SCHEDULED FOR Fri. March 16, 5:45-7:45

Lecturer: Dr. Jerry Clark, 245F
Preliminary office hours: MW 2-4

Recitation Instructors: Greg Pitz