

Syllabus

Physics 260

Fall 2005

Prof. H. H. Chen

Lectures: Section 0401 M 7:00 – 8:50 PM, W 7:00 – 7:50 PM Physics Rm 1410
Section 0402 M 7:00 – 8:50 PM, W 7:00 – 7:50 PM Physics Rm 1410
Section 0403 M 7:00 – 8:50 PM, W 7:00 – 7:50 PM Physics Rm 1410

Recitations: Section 401: W 8:00 – 8:50 PM, Physics Rm 4208
Section 402: W 6:00 – 6:50 PM, Physics Rm 4208
Section 403: M 6:00 – 6:50 PM, Physics Rm 4208

Office: Physics 3102A

Phone: 405-6088, hsinghenchen@yahoo.com

Office Hours: After the class and other times to be announced

Teaching Assistants: To be announced

Pre-requisites: Math 141, I expect you to be proficient in differential and integral calculus as well as vector algebra.

Co-requisite: Physics 261

Textbook: Physics for Scientists and Engineers, Volume I and II, Sixth Edition, by Raymond Serway and John Jewett. Both volumes I and II are required but Vol. II will be used later at about one month into the course.

Important Dates – Fall 2005

First day of class	August 31, Wednesday
Mid term #1	October 10, Monday
Midterm #2	November 14, Monday
Last day of this class	December 12, Monday
Final Exam	December 19, Monday, 7:00 – 9:00 PM in Room 1410

Grading

Homework	20%
Lab (261)	25%
Midterms	15% each
Final	25%

Reading Assignments: You should read the text for sections listed in the schedule before coming to the lectures and recitations. Materials in the textbook not fully covered in the class should also be read. All sections listed in the schedule may appear in the exams.

Homework Assignments: Every Monday a set of homework will be assigned to you. They are due a week later. No credit will be given to late homework unless for a good reason. Since doing homework is the only way to truly learn physics, I strongly urge you to take them seriously. You may form groups to discuss homework problems together. But you should not copy homework from each other. If you do not do homework you will fail the class for certain. You should write neatly and have the physical reasoning of the problem clearly explained.

Exams: Exams are designed to test your understanding of the materials taught, discussed and assigned to you. You are supposed to memorize certain important facts, including definitions, formulas, principles, laws and theorems. The exam will be closed book. You may bring calculators but no crib sheets. No makeup exams will be given to students for any reason other than being seriously ill with a note from your physician before or immediately after the exam.

Laboratory

Physics 261 is the laboratory part of Physics 260, and meets in room PHYS-3219. This course carries one credit and the grade is folded in with the Physics 260 course grade. You must pass Physics 261 in order to pass the entire course. If you do not pass this part of the course you will be required to repeat the entire course. The labs meet for three hours a week. You are expected to attend each class and will be allowed to make up labs only under exceptional circumstances. For more information on the laboratory portion of this course, consult the course web page, or contact Dr. Boyd the instructor of the course. If you have already taken Physics 261 and want that to count for this semester's course, please show the official grade to the instructor.

Course Schedule:

This course will cover Chapters 14 - 28 of Serway & Jewett, Volume I & II. The tentative schedule is the following:

Date	Exams	Topics	Chapters from Serway
Wk 1, 8/31		Fluid Mechanics	14
Wk 2, 9/9		Fluid Mechanics	14
Wk 3, 9/12, 9/14		Oscillation Motion	15
Wk 4, 9/19, 9/21		Wave Motion	16
Wk 5, 9/26, 9/28		Sound Waves	17
Wk 6, 10/3, 10/5		Superposition & Standing Waves	18
Wk 7, 10/10,		First Midterm Exam	Chapters 14 - 18
Wk 7, 10/12		Temperature	19
Wk 8, 10/17, 10/19		Heat & First Law	20
Wk 9, 10/24, 10/26		Kinetic Theory	21
Wk 10, 10/31, 11/2		Heat Engines	22
Wk 11, 11/7, 11/9		Electric Fields	23
Wk 12, 11/14		Second Midterm Exam	Chapters 19 - 22
Wk 12, 11/16		Gauss Law	24
Wk 13, 11/21, 11/23		Electric Potential	25
Wk 14, 11/28, 11/30		Capacitance & Dielectric	26
Wk 15, 12/5, 12/7		Current & Circuits	27, 28
Wk 16, 12/12		Review for Final Exam	Chapters 14 – 28
Wk 17, 12/19		Final Exam	Chapters 14 – 28

Homework Assignments

Set No	Due Date	Problems
#1	9/12	Chapter 14 6, 8, 12, 23, 25, 31, 33, 38
#2	9/19	Chapter 15 3, 5, 9, 19, 22, 30, 33, 35
#3	9/26	Chapter 16 3, 7, 12, 18, 24, 27, 34, 38
#4	10/3	Chapter 17 1, 3, 11, 15, 20, 25, 31, 39
#5	10/10	Chapter 18 1, 9, 14, 20, 21, 25, 46, 52
#6	10/17	Chapter 19 2, 15, 22, 26, 31, 50
#7	10/24	Chapter 20 13, 19, 24, 28, 36, 39, 44, 50
#8	10/31	Chapter 21 1, 4, 15, 21, 26, 31, 35, 40
#9	11/7	Chapter 22 1, 8, 10, 20, 24, 35, 42, 49
#10	11/14	Chapter 23 4, 10, 21, 23, 26, 40
#11	11/21	Chapter 24 1, 7, 10, 15, 24, 30, 40, 48
#12	11/28	Chapter 25 3, 8, 16, 22, 33, 34, 42, 48
#13	12/5	Chapter 26 1, 5, 6, 12, 16, 31, 34, 44, 52