

Syllabus for Physics 202, Spring 2008

Instructor: John D. Shaw
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Office: 226 Sharp Lab
Office Hours: M 2:00 – 5:00
R 3:00 – 5:00

Lectures: TR 11:00 – 12:15
TR 12:30 – 2:00

Sharp Lab 131
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Discussion Sections

SecNum	Day	Start	Finish	Room
20	Fri	1:25 PM	2:15 PM	SHL 118
21	Fri	2:30 PM	3:20 PM	SHL 105
22	Fri	12:20 PM	1:10 PM	SHL 103
23	Thu	2:00 PM	2:50 PM	SHL 122
24	Thu	12:30 PM	1:20 PM	SMI 220
30	Thu	3:30 PM	4:20 PM	SHL 116
31	Thu	5:00 PM	5:50 PM	SHL 118
32	Thu	7:00 PM	7:50 PM	SHL 109
33	Fri	2:30 PM	3:20 PM	SHL109

Laboratory Sections (in SHL 101A)

SecNum	Day	Start	Finish
20	Mon	12:20 PM	2:20 PM
21	Mon	2:30 PM	4:30 PM
22	Mon	4:40 PM	6:40 PM
23	Wed	7:00 PM	9:00 PM
24	Tue	12:30 PM	2:30 PM
30	Tue	2:45 PM	4:45 PM
31	Tue	5:00 PM	7:00 PM
32	Tue	7:00 PM	9:00 PM
33	Wed	1:25 PM	3:25 PM

Class webpage: <http://www.physics.udel.edu/~jdshaw/Phys202>

Teaching Assistants: There are four TAs for this course –
Tentatively, they will be covering the following sections:

	<u>Sections Taught</u>
Rizwan Khalid -	Labs: 24, 30, 31, 32, 33
Yuan Gao -	Discussions: 20, 21, 23, 31, 32
Jun Wan -	Discussions: 22, 24, 30, 33
Lianggong (Bruce) Wen -	Labs: 20, 21, 22, 23

Text & Resources:

Required textbook: *Physics* 7th edition, by Cutnell and Johnson, published by J.H. Wiley. (6th edition is almost identical. Most assigned HW problems are in 6th edition also but with different numbering.) Available at bookstore.

Online Work: WileyPlus will be used. The class URL is
<http://edugen.wiley.com/edugen/class/cls54739/>

Lab Manual: Available at bookstore

Student Study Guide: Optional

Solving Guide: Optional. *Student Solution Manual* 7th edition (published by J.H. Wiley). It contains worked solutions for all the odd-numbered problems that will be assigned as homework in this course.

Course Description and Content:

Final course in sequence with PHYS201. It provides an introduction to physics for students in the life and environmental sciences. Topics include waves and oscillatory motion, sound, electricity and magnetism, and optics. The course will cover chapters 16 through 27 (except chapter 23) of Cutnell and Johnson's book.

Prerequisite: PHYS201. (**Restriction:** PHYS202 and PHYS208 *cannot both* count toward graduation.)

Course Requirements:

Exams:

Due to the large number of students there will be **two midterm exams**, lasting two hours each on Wednesday March 19 and Wednesday May 7 from 5:00 pm until 7:00 pm. There will be a **final exam**, two hours long, given during finals week at a date TBA. The midterm exams and final exam will together account for 50% of the course grade. (For more details on how the tests will be weighted see "Grading System" below.) Midterm #1 will most likely cover chapters 16,17,18 and 19. Midterm #2 will most likely cover chapters 20, 21, 22, 24 and 25. The final exam will be cumulative.

Examinations will be **closed book**, i.e. memory aids, class notes, textbooks, etc. are not allowed. Simple scientific calculators may be used in exams. If you have other than a simple scientific calculator, you must obtain approval before any quiz or exam.

Homework:

There are three kinds of homework: assigned reading, assigned problems to be graded by your TA and Wiley Plus problems.

Reading: The Course Schedule shows what sections of the book are to be covered in each lecture. It is expected that you will have read the relevant sections before each lecture.

Homework Problems: There will be approximately twelve homework assignments (about one per week). Each assignment will consist of two parts. The first part contains about 10 odd-numbered textbook problems whose answers are given at the end of the book and/or whose solutions are contained in the *Student Solution Manual*: these will *not* be handed in or graded. (However, it is in your interest to do them, both to learn and because some quiz and midterm exam questions will be based on the assigned odd-numbered problems.) The second part will be three homework problems posted on-line (*not* WileyPlus problems) and these *will* be handed in. Two problems per set will be chosen to be graded. All problems are to be your own work (i.e. no copying). *The graded homework problems will count 10% of the course grade.*

Homework should be placed in the labeled homework drop-boxes outside Room 131 Sharp Lab by 5 PM on the due date. The homework due dates are shown in the Class Schedule (subject to

change). Homework solutions to handed-in problems will be posted on the class website after the hand-in deadline on the due date. ***Late homework will not be accepted after solutions have been posted.***

Homework and exam papers will be returned in discussion sections. Partial credit will be given for both homework and exam solutions, provided the correct logical steps of the solution can be identified (neatness helps). No credit will be given if only the final answer is written without the steps leading up to it.

WileyPlus: There will about 10 on-line problems (assigned at the same time as the other Homework) and be due 11:00 pm on the same due date. Problems will be available for at least one week prior to the due date. These problems will be graded by the Wiley computers. *The WileyPlus problems will count for a total of 10% of the course grade.*

Discussion:

Most weeks, in discussion sections, there will be a short (10 – 20 min) quiz given at the end. The quiz will consist of one or two problems based on worked examples in the textbook, lecture examples or *odd-numbered* homework problems. The material will be from the chapters of the textbook that previously covered in lecture. E.g. The quiz on February 21/22 can be on any material covered from chapters 16 and 17 of the book.) Altogether there will be 9 such quizzes throughout the semester, your worst quiz grade will be dropped. *The quizzes will count for a total of 15% of the course grade.*

The Discussion Sections are devoted to problem solving. You will meet your discussion section instructor during your first Discussion Section (Feb 14/15).

Laboratories:

During the semester, there will be a total of 9 labs. Labs will be done by groups of three students. These groups will stay the same for the whole semester (except for changes made necessary by withdrawals from the course). In each lab, one person writes the report for the group. Reports will be signed by all participating members of the group, with the author clearly identified. Authorship rotates through the group over the semester. Students should read the lab manual before each lab. There will be a short quiz at the beginning of each lab to assess preparation. The grade for each lab is based partly on the quiz and partly on the report.

For each student, the worst of the 9 lab grades will be dropped and the other 8 averaged to get his or her total Lab Grade. *The total Lab Grade counts for 15% of the total Course Grade.* If a student misses one lab, that will count as the lowest lab grade and be dropped. **Important:** *If a student misses two labs, his or her Course Grade will be lowered by a full letter grade. If a student misses three labs, he or she will fail the course.* (This is the customary rule.)

Missed labs can be made up only in the case of an excused absence (see “Course Policies” below) by attending another lab section in the same week. This should be arranged with your TA first.

Grading of the Course:

The weight of each portion of the course is as follows:

Exam I:	15%
Exam II:	15%
Final Exam:	20%
Total Quizzes:	15%
Total Online Homework (Wiley Plus):	10%
Total Paper Homework (handed in):	10%
Total Labs:	15%

Each homework problem that is graded is graded on a scale of 0 to 10, and your total Homework Grade is the average of your grades on the individual problems (both online and handed in, respectively). Solutions to homework should show all work and for those handed in, be neat and legible.

Each lab is graded on a scale of 0 to 100, and your total Lab Grade is the average of your individual lab grades after your worst lab has been dropped.

Each problem on the quiz from the Discussion Sections is graded on a scale of 0 to 100, and your total Quiz Grade is the average of your individual quiz grades after the worst grade has been dropped.

At the end of the semester, your total numerical course grade is converted into a letter course grade as follows:

A: 93 – 100	C: 73 – 77
A-: 90 – 93	C-: 70 – 72
B+: 87 – 90	D+: 67 – 70
B: 83 – 87	D: 63 – 67
B-: 80 – 83	D-: 60 – 63
C+: 77 – 80	F: Below 60

COURSE POLICIES:**Missed exams or labs**

An exam missed *due to an excused absence* can be made up. See the course instructor to arrange it.

A lab missed *due to an excused absence* can be made up in another lab section the same week if you arrange it with the TA.

The conditions for an excused absence are spelled out in detail in the faculty handbook: <http://www.udel.edu/provost/fachb/III-1-1-attendance.html>. Absences for those religious holy days that are not in the university's Academic Calendar and absences for university athletic competitions are excused absences only if the instructor is notified in the first two weeks of class. Most other kinds of excused absence only require that the instructor be notified in advance. There are some emergency situations where it is impossible to inform the TA/instructor in advance. See the above link where details are given.

Honesty

You are *required* to read and comply with the University's Policy on Academic Dishonesty. We reserve the right to photocopy exam papers before returning them to you after they are graded. During exams you are only allowed to have out writing utensils and simple calculators. You are not to have out any other kinds of devices or any pieces of paper. We will supply both the test papers and an adequate supply of writing and scrap paper.

Listeners

Students taking the class as listeners are required to hand in honest attempts at two-thirds or more of the homework assignments by the due date.

Working Together

You are encouraged to study together and work on homework together. Homework is for the purpose of learning to do problems. If you just copy someone else's homework answers *without having tried to do the problems yourself*, you will learn very little from the homework, and you will be at a disadvantage on the tests, where you will have to rely on your own understanding. (The tests and quizzes count for much more in the Course Grade than does the homework.) My suggestion is that on the graded homework problems you try the problems yourself before asking someone for help. If you get stuck, you can ask a fellow student, or the TA, or me. By getting stuck, and then being shown how to overcome that obstacle, you learn more, and what you learn sinks in much better.