

PHYSICS 202: Spring '95

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Prerequisites : Physics 201 or equivalent.

Materials needed : Text: R.A. Serway, Physics for Scientists & Engineers, 3rd ed. *Updated Ver.*
Laboratory Manual: Rollefson and Richards, Laboratory Experiments in General Physics, 1993 edition.

Laboratory notebook: Spiral bound, preferably with 5 or 6 mm cross hatched ruling. Bring to first laboratory meeting.

Calculator: Must have trigonometric, exponential, and logarithmic functions. Know how to use it and be sure that batteries are charged for exams.

Lectures : The lectures are to supplement, not substitute for, reading and studying the text. They will be shared by Profs. Smith and Scherb

Laboratory : Follow the "General Instructions" in the laboratory manual (pages 1-3). The experiments are to be written up during the laboratory period in the lab notebook. The lab notebook is not to be taken from the laboratory. **YOU MUST COMPLETE AT LEAST 10 OF THE 11 LABORATORY ASSIGNMENTS IN ORDER TO RECEIVE CREDIT FOR THE COURSE.** You must get written permission from *only your* lab T.A. to take a make-up lab. Make up time is given for the labs covered in each exam period during the week of the exam only.

Homework : The homework problems are assigned in the syllabus for each week and should be handed in at the first meeting of your discussion section after week of the assignment. Homework will count toward your grade. Feel free to discuss the homework with others. The solutions will be explained in your discussion section and will be available in the Physics Library.

Discussion Section : There will be a weekly 10-minute quiz consisting of a problem similar to one of the homework problems you have solved.

Office Hours : Teaching Assistants will have office hours in the consultation room (2312 Sterling Hall). You may go to the office hours of any T.A. Profs. Smith and Scherb will have office hours from 11 am to noon, Tues. and Thurs or by appointment.

Examinations : **DO NOT REGISTER FOR THIS COURSE IF YOU ARE NOT SURE THAT YOU WILL BE ABLE TO ATTEND ALL EXAMS.** (*i.e. do not take another course that meets or has exams on Mondays at 5:55 - 6:55 PM, or a Final at 7:45 AM on May 18*). Makeup exams will *not* be given. The average of the other exam scores will be substituted for the missing exam, *provided* you have a written excuse from a physician, dean, or academic advisor only. There will be three one hour exams on the dates shown (Mondays) at 5:55 pm. Rooms to be announced. You may bring *one* 5" x 8" card (crib sheet) to each exam.

Grading : The course grade will be made up of 75% exams (15% for each hour of examination) and 25% discussion, homework and labs.

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Phys. 202 Week	Date (1995)	Chapter	Lab Topic	Homework
1	T Jan. 24	Chapter 23	No Lab	1,8,18,23,29,
	R 26	Chapter 23		38,42,50,52,54
2	T 31	Chapter 24	E-1, part 1	4,8,10,12,31,40,50,58
	R Feb. 2	Chapter 25		3,12
3	T 7	Chapter 25	E-1, part 2	14,26,29,37,46,54,72
	R 9	Chapter 26		6,18,31
4	T 14	Chapter 26	E-2	48,58,62,67
	R 16	Chapter 27		8,12,23,38,45,53
5	M 20	EXAM 5:55 pm Ch 23 - 26		
	T 21	Chapter 28	Make-up	6,14,19,28,32
	R 23	Chapter 28		44,47,54,65,82
6	T 28	Chapter 29	E-3	3,11,14,26,30,42,55,59
	R Mar. 2	Chapter 30		4,16
7	T 7	Chapter 30	E-6	26,34,44,50,55
	R 9	Chapter 31		2,8,18,22,31
8	T 21	Chapters 31,32	E-7	(31)-38,44
	R 23	Chapter 32		2,6,26,39,42,50,58,68
9	M 27	EXAM 5:55 pm Ch 27 - 31		
	T 29	Chapter 33	Make-up	1,10,18,25,31
	R 30	Chapter 33		40,48,52,62,66
10	T Apr. 4	Chapter 16	E-8,E-9	6,10,30,35,42
	R 6	Chapter 17		1,10,20,32,42
11	T 11	Chapter 18	E-8,E-9	7,16,19,32,52,60
	R 13	Chapter 34		5,14,28,30,32
12	T 18	Chapters 34,35	S-1,S-3	(34)-33,41,47
	R 20	Chapter 35		3,11,17,24,30,34,42
13	M 24	EXAM 5:55 pm Ch 32-34,16-18		
	T 25	Chapter 36	Make-up	3,6,13,24,28
	R 27	Chapter 36		44,52,66,72,73
14	T May 2	Chapter 37	L-2	2,20,28,42,51,59
	R 4	Chapters 37,38		(38)-6,17,31,50,58
15	T 9	Chapter 38	L-1	
	R 11	Review		
	W 18	FINAL EXAM 7:45 am Ch 16-18,23-38		

TA tips for Physics 202, Spring, 1995

The initial organizational meeting will be held on Sunday, January 22 at 3:00 PM in 1300 Sterling. All TA's must attend and bring schedules!

Required TA meetings will be at 3:15 on Friday afternoons in 3315 Sterling. They should take no more than half an hour. You are asked to be prompt for all course activities.

Lab policy

1. The laboratory equipment necessary to complete each lab will be set up the week before it is to be done by the students. Please familiarize yourself with the equipment and procedures so that you can answer any questions that arise.
2. Switching lab sections is not allowed.
3. Lab books are not to be taken out of the labs by the students. You may protect them yourself as you see fit, but the books are not to be taken home to be cleaned up or "worked on" by the students.
4. For each laboratory, we will decide whether to grade it by grading the notebooks or having a lab quiz in the next lab section. The first lab will be graded by notebook, the second by quiz. You are to announce the grading decision for each lab at the beginning of that lab.
5. In order for a student to be allowed to perform his laboratory assignment during a make-up session instead of during his scheduled time, he must obtain written permission from his own TA. This permission should only be granted in cases of documented medical or family emergencies.
6. Please do not start any laboratory before the scheduled start time.
7. *If a major illness or family emergency arises so that you cannot make your scheduled laboratory, it is your responsibility to find another TA to take your place, as well as notifying one of the professors.*

Exam policy

1. Each TA is to be present while the students are taking their exams. Please record the attendance of the students in your section taking the exam. Make sure that each student from your section personally hands you his/her exam.
2. The TA's and professor writing each exam will get together and standardize their grading procedures so that the grading of exams will be fair and uniform. The exams will be made up so that hopefully the burden of grading will be felt equally by all TA's by the end of the semester.
3. To avoid possible prejudice during discussion sessions, the TA's will not be given a copy of an exam until the time of the exam. This way no student will have an advantage over any other through inadvertent discussion of problems related to the exam.

Grading

1. **Homework:** Homework assigned in the previous week will be collected during the first discussion section of the week. TA's record the number of problems answered, but do not grade the homework. Homework sets are returned during the second discussion section of the week. The solution sets will be distributed to the physics library on the Thursday after the assignment week. This will be done by the High Energy Physics Office.
2. **Quizzes:** One 10-minute quiz will be given each week during the discussion section of the TA's choice. The quiz will be one of the homework problems due that week with trivial modifications. There will be no quiz given during the discussion section immediately after an exam.

3. Exams: The solutions will be broken down considerably to indicate how partial credit is to be assigned. In general, we will take off one point for numerical errors or wrong units. Propagation of errors from one part of a problem to another should not result in additional loss of credit beyond that initially deducted. The relationship between numerical and alphabetic grades will be determined in consultation with the TA's at the end of the semester. Part of this consultation will involve your personal evaluation of a student, based on performance in lab and effort during discussion sessions. For this reason, please try to get to know all of your students, and become familiar with how they operate during labs.
4. Lab Notebooks: Each lab report selected for grading is to be graded on a scale from one to ten in half point increments. Five points is failing and six points is barely passing. A ten should be given in only extremely exceptional cases, where the report could be used as a template for an ideal lab report. A 9.5 stands for a report where everything is perfectly correct, and so on from there. We do not expect detailed grading. Labs are to be graded before the next laboratory occurs.
5. Final TA Grade: This is to be based on 60% Lab, 20% Discussion Quizzes, and 20% TA evaluation of Lab, Discussion, Homework, and Quiz performance. The score is placed on a 100 point scale, with a median in the 70 - 80 point range. Do not renormalize your scores. The course professors will normalize the TA grades.

Discussion Sections

1. Work out for the students example problems as requested by students, brought up in lecture or of your own choosing.
2. Pick problems out of Serway that are similar to those in the current homework assignment to work out interactively in class. Quizzes will be given as specified above. Students should be encouraged to discuss methods and procedures for tackling problems. For example, ask them what they would do next at each step of the solution. This way, you can lead them by the hand until they understand how to solve physics problems, and you also get an idea of what kind of backgrounds the students have and where their problem areas lay.
3. *If a major illness or family emergency arises so that you cannot make your scheduled discussion section, it is your responsibility to find another TA to take your place, as well as notifying one of the professors.*

Office Hours

1. The meetings are held in room 2312 Sterling as indicated in the schedule. TA's must sign up for one office hour per discussion section taught on the schedule sheet. Only one TA per time block. All Physics 202 students can attend any of these meetings, not just those in the presiding TA's own section.
2. *If an emergency arises so that you cannot make your scheduled office hours, it is your responsibility to find another TA to take your place.*

Send people who want to change sections or add the course should be told to use touchtone registration during the first week. After that, you are to advise them that such changes are very difficult to make, and if they insist, you are to send them to Jean Buehlman (262-2629) in the Physics Department office. She has to approve all changes so that one section does not become overloaded.

Instructors:

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RULES FOR ADMINISTRATION OF EXAMS

Physics 202

Silence from beginning of exam until students exit the room. Announce this at the beginning and end of the exam.

Students sit in parallel lines separated in each row by one empty seat.

Time of Exam beginning and end are written on the blackboard.

Time remaining is written on the board every 10 minutes and a vocal warning is issued at 10 and 5 minutes remaining.

No students are allowed to leave during the last 5 minutes of the exam. This is announced once at the beginning of the exam and at the 5 minute warning.

TA's are present during the exam, record the attendance of the students in their sections and collect the exam from their students personally.

All Exams have a cover page without questions.

The Exams are handed out so that all students have a copy before the time to begin the exam.

Students are instructed to write their name on the exam cover page, but not to turn the cover page over until they are told to begin.

At the time for the exam to begin, the students are told to turn over the cover page, write their name at the top of each page, count the number of pages, raise their hand if they do not have the correct number of pages, and to begin the exam.

At the conclusion of the exam the students are instructed to stop writing. They are warned that if they write past the instruction to stop writing they will receive a zero. This warning is issued before the exam begins and when the exam is over.

RULES FOR GRADING OF EXAMS

Physics 202

Assignments of grading responsibilities are made at the beginning of the semester.

Each TA will grade all of one problem for a particular exam as assigned.

Deviations in grading from the solution key must be cleared with the instructors.

Partial credit is to be awarded wherever possible. Any answer that bears a remote resemblance to a correct approach or has written down the appropriate formula should receive about 25% of the possible points for that answer. Any answer that demonstrates a reasonable start towards solution should receive 50%.

Purely arithmetic mistakes should only have one point taken off. One point is taken off for units or a sign mistake. Arithmetic mistakes that propagate through a problem should only have points deducted once, not for each answer affected.

If a correct answer shows no work and such work is required to determine the answer, only half credit is awarded. Each exam says clearly "show all work".

Each TA totals up the exam grade for the exams in their sections.

All blank areas on front and back of sheets are to be marked through with a red line so that returned exams cannot be tampered with.

No exams are to be returned to the students until the curve for the exam is released.

The final exam is not returned to the students, although they may see the course instructors to view their final exams.

If any tampering by a student is suspected, all future exams are to be xeroxed before return to the student.