

PHYSICS 9D: Section A, Spring 2005, MWF 2:10-3:00 pm  
J. Gunion, 441 Phys/Geo

TEXT: *Modern Physics* by Serway, Moses, and Moyer. Students are responsible for all sections of the text assigned in the Schedule, whether or not covered in class, and, IN ADDITION, all lecture material which is not covered in the text. Be alert for possible alterations to schedule.

HOMEWORK AND QUIZZES: Tentative homework problem assignments are listed later, below the schedule. About three problems are assigned per lecture. You are strongly urged to: a) not let yourself fall behind; and b) do more problems than those assigned. Numerical final answers to the assigned problems are posted on my web page under problem\_answers. Providing these answers should enable you to know when you have done a problem correctly. If in doubt, ask for help during the DISCUSSION SECTION. To make sure you work to develop your problem solving skills, actual full problem solutions will be made available only AFTER the corresponding quiz. The homework will not be collected. Instead there will be 5 closed-book, closed-notes quizzes of 10 to 15 minute duration (see Schedule). These quizzes will consist of homework problems with the numbers changed, or problems so similar to homework problems that they should be *easily* solved by a student who has successfully completed *and understood* the homework. Calculators will be allowed. NO CREDIT WILL BE GIVEN FOR ANSWERS WITHOUT WORK SHOWN. Equations will not generally be provided; the quizzes will focus only on the the most basic (simple) equations; constants will be provided. Each student's lowest quiz score will be dropped. Make-up quizzes will NOT be given. Numerical grade distributions will be posted on bulletin board on 1st floor of Phys/Geo building.

EXAMS: The exams will be closed-book, and no notes or formula pages will be allowed. Calculators will be allowed. BLUE BOOKS ( $8\frac{1}{2} \times 11$ , Engineering or Law) are required for the midterms and the final; you need to bring one on exam days. As for quizzes, NO CREDIT WILL BE GIVEN FOR ANSWERS WITHOUT WORK SHOWN. Most useful equations and constants will be provided; however, you will be expected to remember the most basic (simple) equations. Part of each exam will be a quiz-like problem on any chapter not previously covered by a quiz. Regrades of exams will be accepted within ONE WEEK only of the exam's return. ATTACH A NOTE with your grievance to the exam. DO NOT write on the exam. Regrades should be directed to me, either following class or at my office hour. The midterm exam dates are April 22, and May 20. Make-up exams will not be given. Any student missing a midterm exam, will have his other midterm and his final exam reweighted as described below. The final exam is scheduled on Tuesday June 14, 10:30 a.m. - 12:30 p.m. Students who wish to take the final exam EARLY because they have THREE or more finals on that day (and can furnish PROOF) will be allowed to take it the preceding day, provided arrangements are made by June 3. However, I urge you to check the final exam schedules for your courses immediately, and try to change to another section of this course if you have too many finals on June 14.

DISCUSSION SECTIONS: There is a mandatory discussion section for the course. **Your TA will be Derrick Kiley.** You will already have been assigned to one of the sections. Each discussion section will meet once a week, beginning the week of April 4. Failure to attend will negatively impact your grade, as described below. For your own good, it is IMPERATIVE that you attend the discussion section. The concepts introduced in 9D are profound and often confusing and counter-intuitive at first. The opportunity to ask questions in the more intimate atmosphere of a discussion session has proven crucial to students' understanding and success in the course.

GRADING: Numerical final grades will be computed in two ways, with the highest employed in determining the final letter grade. In procedure I, each of the midterm exams will count for 22%, and the final exam will count for 36% of the total grade. In procedure II, your best midterm will be weighted 35% and the final weighted 45%. Quizzes will count for 20% of your total lecture grade in both procedures. Procedure II will automatically be employed for any student missing one of the midterms. Attendance at discussion sections is mandatory. If you do not attend at least 7 of the 9 discussion sections, your grade will generally be shifted down by 1/3 unit: e.g. A- to B+. If you attend fewer than 4, your grade will

be shifted down by 2/3 unit. The class will be graded on a curve. However, no firm letter grade will be given on any exam or quiz. The mean and standard deviation will be given for each exam and quiz, as well as a ROUGH breakdown of letter grades in the case of exams.

ASSISTANCE: I will be scheduling a weekly help/problem session after polling the class the first day of lectures — tentatively I will try for Thursday evenings, 6 to 7 p.m., which might be a time everyone can potentially come. The Thursday, April 21 session will be a review session for the April 22 Midterm. The Thursday, May 19 review session will be a review session for the May 20 Midterm. I will also have office hours (generally for matters other than problem-solving) Thursdays from 11 a.m. to 12 a.m.. I am also available by appointment. Your discussion section leader will also schedule regular office hours; be sure to get this information at the first discussion section meeting.

MISCELLANEOUS: There is a glass case in the east wing of the first floor of the Phys/Geo building designated for this class. A schedule, quiz problem solutions, keys to exams, and various other important communiques (such as answers to assigned problems, grade distribution curves, grade entries as contained in the computer grading program that you should check for accuracy, and errors in the text) will be posted there from time to time throughout the quarter. Please check the board regularly.

WEBPAGE: There will be a web page for the course. It will be found under the 'courses' section of my home page: [higgs.ucdavis.edu/gunion](http://higgs.ucdavis.edu/gunion). It will contain much the same material as the glass case in the Phys/Geo building.

#### Tentative SCHEDULE FOR READING AND LECTURES — 9D-1

##### April

1: Ch. 1: Secs. 1.1-1.3  
 4: Ch. 1: Secs. 1.4-1.5  
 6: Ch. 1: Secs. 1.5-1.7  
 8: Ch. 2: Secs. 2.1-2.3  
 11: Ch. 2: Secs. 2.4-2.5  
 13: Ch. 3: Secs. 3.1-3.2;  
 QUIZ, Chs. 1 and 2  
 15: Ch. 3: Secs. 3.4-3.5  
 18: Ch. 3: Secs. 3.5-3.6  
 20: Ch. 4: 4.1-4.2  
 22: MIDTERM, Chs. 1-3  
 25: Ch. 4: 4.2-4.3  
 27: Ch. 4: 4.3-4.4  
 29: Ch. 4: 4.5; Ch. 5: 5.1-5.2

##### May

2: Ch. 5: Secs. 5.2; QUIZ, Ch. 4  
 4: Ch. 5: Secs. 5.3,5.5  
 6: Ch. 5: Secs. 5.6-5.8; Ch. 6: Sec. 6.1  
 9: Ch. 6: Secs. 6.2-6.4  
 11: Ch. 6: Secs. 6.4-6.8  
 13: Ch. 7: Sec. 7.1; QUIZ, Chs. 5 and 6  
 16: Ch. 7: Sec. 7.2 to p. 241; Ch. 8: Secs. 8.1-8.2  
 18: Ch. 8: Secs. 8.3-8.5  
 20: MIDTERM, Chs. 4-8  
 23: Ch. 9: Secs. 9.1-9.2  
 25: Ch. 9: Secs. 9.3-9.4,9.6  
 27: Ch. 13: Sec. 13.1 to Eq. (13.2), Sec. 13.2;  
 QUIZ, Ch. 9  
 30: Holiday

##### June

1: Ch. 14: Secs. 14.1,14.4,14.6 to Example 14.6  
 3: Ch. 15: Secs. 15.1-15.2; QUIZ on material from Chs. 13 and 14  
 6: Ch. 15: Secs. 15.3-15.7  
 8: Ch. 15: Secs. 15.8-15.12  
 14: FINAL EXAM: 10:30 a.m. - 12:30 p.m.; comprehensive

#### Tentative PROBLEM ASSIGNMENTS

Chapter 1: 4,5,6,11,13,16,20,21,37  
 Chapter 2: 1,3,8,11,16,17,23,4-vector problem  
 Chapter 3: 4,8,9,12,13,15,25,29,37,43  
 Chapter 4: 3,7,8,9,13,17,18,19,23,33,37  
 Chapter 5: 7,10,11,15,18,20,26,28,31  
 Chapter 6: 1,3,5,9,16,24,30,35

Chapter 7: 1,2,3,5,16  
 Chapter 8: 1,4,9,13,18,23  
 Chapter 9: 1,3,9,10,17,21,22  
 Chapter 13: 1,2,12,16  
 Chapter 14: 3,7,21,30,31  
 Chapter 15: 2,3,5,6,8,11,18,34