

Physics 9B  
Section C  
Fall 2007

SYLLABUS

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<http://maxwell.ucdavis.edu/~cole/phy9b/>

Please put "phy9" in the email subject; otherwise, it risks being lost in the spam.

**Text:** The text for the course is *University Physics(ed. 11)* by Sears, *et al.* This text, the lecture notes, and a set of notes entitled *Introduction to Classical Fluids* by Rodney Cole (available on the 9B web site) are the primary sources for the course. Other texts you may find useful are listed on the back of this page and are available in the Physical Sciences Library. Some may be on reserve.

**Course:** Lecture will begin at 1:10 pm on MWF in 66 Ro. It is mandatory that you attend lectures because I will emphasize some topics not covered in the text, and these points may appear on exams. Announcements, software, and solutions will also be available from the 9B web pages.

**Drop-in Office Hours(245 Phys/Geo): W 2:10 PM, Th 10 AM, F 10 AM.**

**Optional Problem Solving: Tu 3:10 pm (158 RO), and Th 3:10 pm (3218 Dutton)** If you find the problems inordinately difficult, be sure to attend a problem solving session.

**Outline:**

Waves (ch 15–16)	3	weeks
Geometrical Optics (ch 33–34)	1	"
Physical Optics (ch 35–36)	2	"
Temperature & Heat (ch 17)	1	"
Thermodynamics and Statistical Mechanics (ch 18–20)	2	"
Fluids (ch 14)	1	"

**Important Dates and Problem Sets<sup>1</sup> :**

**Oct. 5 Quiz #1:** Ch 15: Q :9; P: 1,11,12,16,48,54,55,59,64,81.

**12 Quiz #2:** Ch 15: Q: 13,20; P: 26,28,43,71,72,82, Ch 16 P 29,52,53,62.

**19 Quiz #3:** Ch 16: Q: 1,12,21; P: 20,40,66,74,77. Ch 33 P:16,40,48,53.

**26 Prob #4:** Ch 34: P: 2,7,22,27,47,60,64,87,94,96.  
& **Midterm 1** (over chapters 15-16,33-34)

**Nov. 2 Quiz #5:** Ch 35: Q: 6,14; P:10,23,27,33,34,38,39,48,51,56,59.

**12 Veteran's Day**

**Quiz #6:** Ch 36: Q: 10; P: 19,24,31,35,45,56,58,60; Ch 14: Q23, P: 12,25,46.

**16 Prob #7:** Ch 17: Q: 8,25; P: 5,53,70,91,101,113,116,121.  
& **Midterm 2** (over chapters 35-36, 14.1-14.3)

**21 Prob #8:** Ch 18 Q: 5,14; P: 14,41,43,59,62,66,69,73; (Additional problems -see web)

**23 Thanksgiving Holiday**

**30 Quiz #9:** Ch 18: 32,48,83 Ch 19: Q: 9,15 ; P: 14,18,29,45,54,58,61.

**Dec. 7 Quiz#10:** Ch 20: Q:1,6,7; P:17,24,34,36,59,60 Ch 14: Q:25,27;  
P:31,35,37,76,80,84,86; Additional problems-see web.

**13 Final Exam 6:00 PM,** 66 RO-see room schedule (comprehensive ch 14-20,33-36)

Subject to change upon the whim of the instructor.

**To ADD: Do NOT use SIS Web to add or drop the Discussion! Go to the discussion you wish to get into. To change lab or lecture:** Find a Lab with space for you. The TA will give you a PTA number to add the lab and another PTA for the lecture. Use these numbers in SIS Web as soon as possible; they are only good for 48 hours.

**Grades:** For the lecture part of your grade, there will be two midterms each worth 120 points (23%), a comprehensive final worth 180 points (35%), quizzes worth 50 points (10%) and discussion worth 60 pts (8%) giving a total of 530 points for the class. You will receive 2 points for each discussion you attend and participation will be worth 40 points. For the lecture part you will be graded on a normal curve, but no letter grades will be assigned until the total points for the course is tabulated. After an exam has been graded, a relative scale will be posted in class.

**Labs: Labs begin October 1.** You MUST be enrolled simultaneously in a lab section. If you are not already enrolled in a lab section, you must enroll IN PERSON at the next meeting of a lab section that has space available. **Do NOT use RSVP for the Lab! Failure to take and pass the lab results in an automatic grade of "F" for the entire course.** Any exception (e.g., use of a prior lab grade) requires Physics Department approval prior to the end of the first week of classes. Laboratory will roughly count 20% and will be included by either raising your course grade by one step (say from a C to a C+) for a HIGH-PASS or lowering your course graded for a LOW-PASS except for grades of A or D-. A Low pass will not necessarily drop you from a D- to an F nor will a high pass automatically take you from an A to an A+.

**Exams: Bring a Blue Book to all exams.** On all exams (excluding quizzes) you will be allowed one 8 1/2" X 11" sheet of notes and a calculator. All integrals and constants will be provided, although no physics formulae will be given. Make up exams except in dire emergencies must be arranged **BEFORE THE DAY OF THE EXAMINATION**, and will be oral examinations. If you cannot reach me before the exam and are sick, obtain a **WRITTEN EXCUSE FROM THE HEALTH SERVICE. ONLY IN EXTREME EMERGENCIES WILL YOU BE ALLOWED TO CHANGE THE DATE OF THE FINAL** (plane reservations is not one of these). The final will only be given on the day scheduled.

**Homework & Quizzes:** You are expected to have completed the homework by the quiz date listed above; however, the homework will not be collected. Instead, seven, ten-minute, closed book and notes quizzes will be given at the end of lecture on the dates listed. The quiz will consist of one homework problem in which the numbers have been changed. The homework problems are a very important part of the course and those assigned are considered the **BARE MINIMUM** necessary to understand the course material, A students should expect to work many more problems on their own. Correct solutions can be obtained from [maxwell.ucdavis.edu/~cole/phy9b/probs/](http://maxwell.ucdavis.edu/~cole/phy9b/probs/) **after the quiz is taken.** Your lowest quiz score will be dropped. Because we are interested in how you obtained a particular answer rather than what that answer is, **NO CREDIT WILL BE GIVEN FOR ANSWERS WITHOUT WORK.**

**Regrades:** If you believe the reader made a mistake in the evaluation of one of your problems, you can submit the problem for a regrade by writing a very short comment on the front of the quiz or exam stating in which problem the mistake was made and **RETURN THE EXAM TO ME. MAKE NO OTHER CHANGES ON THE EXAM!** The regrades do not go to the readers. I personally correct all regrades. You have one week and **ONLY ONE WEEK** from the time the exam is returned to ask for a regrade.

**References:** These books are on reserve at the Shields Library (except where noted).

R. Cole, *So You Want to Take Physics*, Thompson-Cole. (2004).

<sup>2</sup>R.P. Feynman, *The Feynman Lectures on Physics*, Vol. 1 & 2, Addison-Wesley (1964).

P. Tipler, *Physics*, 4th ed., Worth (1998).

D. Halliday, R. Resnick, J. Walker, *Fundamentals of Physics*, 4th ed., Wiley (1993).

<sup>2</sup>Excellent discussions of the physics, but uses advanced math. Read it for the physics.