First two weeks: You must attend your discussion and laboratory (DL) sections during the first two weeks of class, and submit the first homework assignment (due Fri 11:59pm) to remain enrolled in the class. Any enrollment changes must be done via TeleBears. Further information regarding enrollment will be posted on the course website. You must attend your enrolled DL section, if you cannot then contact your section GSI.

Drop Deadline: January 30, 2009. (Early Drop Deadline course!)

Prerequisites: Math 1A is a prerequisite. Math 1B should be taken concurrently.

Required Texts:
(1) D. C. Giancoli, Physics for Scientists and Engineers, Volumes I, 4th edition. We will cover chapters 1 through 15, including most sections marked “Optional.” You will be expected to read those sections of the book relevant to a given lecture before class.

(2) Birkett and Elby, Physics 7A Workbook is required for the Discussion/Lab sessions. The workbook consists of qualitative questions and quantitative problems that will help you gain mastery of the material. In addition, the workbook contains laboratory handouts which you will complete during the course's various labs.

Suggested Texts:
(1) Elby, Portable TA: Problem Solving Guide, Volume 1. This extremely popular resource contains practice problems about classical mechanics with completely worked out solutions. It is meant to be worked, not read. These practice problems are for your own benefit; we will not collect your work on them. We suggest working through at least some of the problems in Elby before attempting each week’s homework assignment.


Homework Subscription: All of our Homework will be done through an internet subscription service, Mastering Physics. You can register for your Mastering Physics subscription by either purchasing a registration card along with your textbook, or on-line at the Mastering Physics site with a major credit card when you log on. (~$36 for two years) Duplicate subscriptions will be deleted.

Mastering Physics: You can log on to our Homework service at this address: http://www.masteringphysics.com There will also be a link to this site through the Physics 7A course website. To log in to Mastering Physics, you need:
Student Access Code: purchase at the bookstore or on the Mastering Physics website
Student ID #: your 8-digit Cal student ID#
Course ID: Phy7ASp09L1
UC Berkeley Zip Code: 94720

We strongly encourage you to try logging on to Mastering Physics today! If you have any problems logging in, email the Head GSI immediately, include the phrase “Mastering Physics” in the subject, this includes registering for the incorrect section.
Homework: Working on homework problems is central to learning the course material. You will have a weekly problem set of approximately 10 problems of varying difficulty, due as listed on the Mastering Physics website (generally Friday at 11:59pm). All of our homework assignments will be done on-line through Mastering Physics. Assignments will appear on your Mastering Physics account approximately 7 days before they are due. Generally, homework will be due by 11:59PM on Fridays, with possible exceptions when there is a midterm that week. Each homework set will carry a maximum set score of 100 points, and will contain a set of easier problems worth approximately 10 points each, and a set of harder problems, worth 20-50 points each. You can mix and match easy and hard problems, but your total score will be capped at 100. I hope you will find it stimulating to tackle more challenging problems and would not always take an easy way out! The first (ungraded) MasteringPhysics assignment is due this week, Friday, at 11:59 PM. The first assignment “Intro to MasteringPhysics” is not graded, and is really a worksheet on using Mastering Physics. The second assignment “Homework 1: Measurement, 1-D Kinematics” is your first real homework set of the semester, and will be due Friday, Jan 30 at 11:59PM. Late homework will not be accepted. We will, however, drop your lowest homework score.

You should attempt each homework problem for yourself, but we encourage you to work with peers when you get stuck. When you submit an assignment on-line, however, you are stating that the solutions that you are presenting are your own, and not copied out of a book or from a friend. You will only learn from doing the problems if in the end you can formulate your own solutions! Solution sets to all of the problems will be available on the website after the due date.

Note, with Mastering Physics you have three (3) chances to submit each homework part for grading, with a penalty for each submission. Hints are available on-line, but you will receive a little extra credit for not using them.

Discussion/Laboratory Sections: Learning physics means doing physics—discussing physics concepts, working in the laboratory, and working (many) physics problems. Your Discussion/Laboratory Sections ("DLS") are designed to help you learn the course material by working with it in as many ways as possible.

In most of your DL sessions you will be working in groups, with help from your GSI, on materials that we have developed to do the following: help improve your conceptual understanding of the course material; see how the material relates to everyday life; and build strong problem solving skills for each topic. The goal is for you to learn how to do physics, and the sections will thus not be based on your GSI lecturing or solving sample problems on the board while you just watch. Attendance will be taken at these sections and participation is expected, but you will not be graded on your performance in solving worksheet problems; they are, rather, for your practice. There will, however, be occasional quizzes that may count toward your course grade.

In some weeks, as shown on the Course Syllabus, you will complete laboratory exercises that are also designed to help you explore the main course concepts. Your work for the labs will be completed on handouts that can be found in your Physics 7A Workbook. You will hand in your work before you leave the lab. Because our labs are closely integrated with the rest of the course, they must be completed when scheduled. If for a valid reason (e.g., illness) you must miss your DL section's lab time, alert your GSI and try to complete the lab with another DL section during that same week. We will also leave one set-up in the room for an additional week, so if necessary one time during the semester with approval from your GSI, you may make up a lab in a different DL section the following week. Uncompleted labs will count as a "zero" in computing your course grade, and your final course grade will be further reduced by 1/3 (B+ to B, etc.) for each missing lab.

Exams and grades: There will be two midterm examinations (in weeks 6 and 11) and a final exam. Dates and times are listed on the following page. Grades will be determined from a weighting of all the elements of the course approximately as follows:

- first midterm exam: 15%
- second midterm exam: 15%
- final exam: 35%
- Homework: 30%
- laboratory/discussion/quizzes: 5%

Grades in Sec 1 will be assigned on a fixed, not curved, scale. A grade of "Incomplete" will only be given under dire circumstances beyond a student’s control, and only when work already completed is of at least C quality.

If you are in trouble (behind in homework, doing worse in the course than you would like, etc.) for whatever reason, please let us know. We’ll try to help! Additional help is available through the Student Learning Center (Golden Bear Center), the Honors Society, the Society of Physics Students, and the Physics Scholars Program. Inquire in the Physics Department Undergraduate Student Services Office (368 LeConte Hall) for further information. There is quite a lot of material in this course, and not a lot of time to learn it. There are many resources available to help you. We strongly encourage you to take advantage of them.