

## Course Information

**Instructor:** Professor Ahmet Yildiz

- Email: yildiz@berkeley.edu
- Office Hours: Tuesday 5-6 and Friday 12-1, 474 Stanley Hall
- As the instructor for this course, I will teach the physical concepts, course material and solving problems during my office hours, after the lectures, or through emails.

**Head GSI:** Eric Dodds

- Email: edodds@berkeley.edu
- Office Hours: by appointment.
- All administrative issues (e.g. switching sections, dropping the class, adding the class, missing labs, missing exams due to serious health issues, Mastering Physics conflicts...) have to be addressed directly to the head GSI.
- I WILL NOT be able to help you resolve these issues. If you happen to e-mail me such requests by mistake, I MAY forward them to the head GSI.

**Course Center:** 105 Le Conte

- Please find out your GSI assignment and office hours.
- All GSI office hours are held in the course center.
- You can go to the whichever GSI office hours that work with you schedule.
- The course center is designed to facilitate group work. It will be open during business hours whether or not there are office hours being held, so feel free to come to work individually or in groups any time.
- There will be a Piazza forum for Q&A. You will receive an email from the head GSI.

**Required Course Materials:**

- Textbook: Giancoli, *Physics for Scientists & Engineers*, Volume 1 (Custom Edition for UC Berkeley)
- workbook/lab manual: Birkett & Elby, *7A Workbook*
- online homework: Mastering Physics subscription

**Prerequisites:**

- Math 1A (Calculus) is a prerequisite
- Math 1B may be taken concurrently
- Math proficiency in the following areas is essential: algebra, trigonometry, single-variable differentiation, derivation, integration, and vectors. If you are uncertain about your preparation, consult the head GSI.

**Course Webpage:** [bcourses.berkeley.edu](http://bcourses.berkeley.edu)

- Course material (syllabus, announcements, lecture slides, old exams...) will be uploaded to the course website in <https://bcourses.berkeley.edu/courses/1468751>.

**Enrollment:**

- Early Drop Deadline: End of 2nd week (Jan 26th 2018) at midnight.
- All enrollment is through CalCentral
- Contact the head GSI for issues related to switching your sections. You may want to pair up with another student to swap sections.
- You must attend ALL discussion/laboratory (DL) sections for which you are registered in the first two weeks to remain enrolled in the class.

**Lectures:**

- Time/Location: MWF 11:10 -12:00, 1 LeConte Hall
- There are lectures, lecture demos, after class discussions, office hours, GSI discussion/problem solving sections (Workbook problems), labs, homeworks (Mastering Physics, online).
- Physics 7A will cover Newtonian Mechanics, including topics such as Linear Motion, Rotational Motion, Gravitation, Fluids, and Waves.
- We have 16 chapters to cover in 14 weeks (including holidays). This is a lot of material and we have to move fast. Please try to keep up with the material and let us know if we move way too fast! We will cover first chapters quickly and slow down to the usual pace of the course in Newtonian Mechanics.
- We assume that you have seen this material at a simpler level in high school. If you have not taken Physics before, you may find it difficult to catch up with the pace of the course. I strongly recommend spending extra time on problem solving and GSI office hours.

**Discussion/Lab Sections:**

- Discussion and lab (D/L) sections begin on the first day of instruction. You must attend your D/L sections during the first and second week, or you may be dropped.
- DL sections meet twice a week for two hours EVERY week, even when there is no lab scheduled.
- Quizzes will be given in section on weeks when there is no lab.
- In your DL sections you will practice problems and discuss concepts in small groups, with the guidance of a GSI, as well as perform labs and take quizzes.
- You must bring your workbook to your DL section.
- DL sections will be graded based on attendance and active participation.

**Labs:**

- There will be 7 labs throughout the semester (see the syllabus) performed in your DL section. While you perform the labs you will complete the lab worksheet found in the workbook. You will turn in the lab worksheet at the end of your lab section.
- If you miss a lab for a valid reason (e.g. illness) you must email your GSI to let them know the reason for your absence. To make up a missed lab, you should attend another DL

section during that same week, also emailing that GSI ahead of time to let them know you will be attending their section. If you are not able to make up a lab in the week that it runs, one lab setup will also be available in each lab room the following week for makeups. You may only make up a lab in the following week once per semester. After that following week, you will not be able to make up the lab at all.

- You are required to complete ALL labs: any uncompleted labs will result in a reduction of your grade by 1/3 of a letter grade for each lab missed. If you miss more than one lab, you will fail this course.

### **Quizzes:**

- Quizzes will be given in DL section on weeks that there is no lab scheduled.
- Each quiz will be a single problem that is very closely related to a HW problem that you have already turned in.
- Your quizzes will be primarily graded on your solutions, not your answers. Your solutions must clearly demonstrate your reasoning with words and equations. The quizzes are intended to give you practice working out exam-style solutions.
- The quizzes are closed book, but you will be allowed to bring one handwritten 3"x5" card (both sides) of notes to the quizzes.
- We will drop your lowest quiz grade. There will be NO makeup quizzes.

### **Homework:**

- There will be weekly homework due Fridays at 11 pm.
- Homework will be a combination of computer-based homework on the Mastering Physics website and traditional turned in homework. The written homework will be turned in electronically by scanning or photographing your assignment to **Gradescope**. Please check your scanned documents or photographs to ensure that the content is legible. If not, the written HW will not be graded.
- For Mastering Physics, you must purchase a registration card either along with your textbook, or on the Mastering Physics website ([www.masteringphysics.com](http://www.masteringphysics.com)) directly.
- You will need to sign up for Mastering Physics with your Cal SID# and use the Course ID: **MPL44953**. If your Cal SID # is incorrect you will not receive homework credit.
- Your homework grade will be split 50/50 between Mastering Physics and written homework. One of the written HW problems will be picked randomly and graded each week. You will receive feedback for your written solution.
- No late homework will be accepted. We will drop your lowest two homework scores.
- We encourage you to work with and help other students, however the homework you submit must ultimately be your own work. This means that while other students may teach you how to do a problem, you must eventually be able to solve the problem on your own and submit your own solution, not one copied from another student.

### **Exams:**

- There will be two evening midterms and a final exam (please check dates in the syllabus).
- Topic coverage of each exam will be announced a week before the exam in lectures and in the course website.

- The final exam is not cumulative and will focus on the last chapters, but you may be required to know the fundamentals of mechanics in order to solve those questions.
- You **MUST** be available to take all exams. Unresolvable conflicts with the exam dates must be discussed with the head GSI immediately.
- All exams are closed book—you will be allowed one letter sized paper (one side only) handwritten notes for each exam.
- Bring your own blue book (or green book) to the exams.
- Exams will include conceptual questions and workbook questions, as well as quantitative problems. The level of exam questions is higher than practice problems at the beginning of the chapters in Giancoli and most of the homework problems. They are at the level of end of chapter problems with (\*) or the ones in “General Problems”. Workbook problems are better representative of the exam level.
- Questions and answers of the old exams are uploaded to the bcourses website.
- **Please write legibly.** Exam problems will be graded based on your solutions. Partial credit will be given even if you do not have the correct answer. No credit will be given for correct answers without a clear reasoning and showing your work.

**Grading:**

- The grade breakdown is the following:

Midterm 1	22.5%
Midterm 2	22.5%
Final Exam	35%
Homework	10%
Labs & Quizzes	10%

- We will follow the department guidelines for grade distribution: roughly 25% A’s, 40% B’s and 35% C’s. D’s and F’s will be given on a case-by-case basis to students displaying especially poor performance.

**Accommodations:**

- Students who require special accommodations for the class (e.g. for exams, lecture, labs) must contact the instructor at the beginning of the semester.