

## Course Information

**Instructor:** Professor Adrian T. Lee

- Email: [Adrian.Lee@berkeley.edu](mailto:Adrian.Lee@berkeley.edu)
- Office Hours:
- Wednesday 4:00 to 4:30pm: <https://berkeley.zoom.us/my/adrianleezoom>
- Thursday 9:30am to 10:30am: Same zoom address as above at start of semester, but in Physics North 1, once we are in person.

**Head GSI:** Newton Cheng

- Email: [newtoncheng@berkeley.edu](mailto:newtoncheng@berkeley.edu)
- Office Hours: TBA by appointment.
- All administrative issues may be addressed directly to the head GSI

**Course Webpage:** [bcourses.berkeley.edu](https://bcourses.berkeley.edu). There will also be a Discord collaboration site.

### Enrollment:

- Early Drop Deadline: Friday 1/28 at midnight.
- All enrollment is through CalCentral
- You must attend ALL discussion/laboratory (DL) sections in the first two weeks to remain enrolled in the class. You must attend the DL sections for which you are registered.

### Prerequisites:

- Math 1A (Calculus) is a prerequisite
- Math 1B may be taken concurrently

### Lecture:

- Lectures are given in pre-recorded videos on Bcourses.
  - A quiz with a few simple questions will be given on the lecture videos on Bcourses.
- Lecture sessions will be held live, but we will do active exercises and problems.
  - Time/Location:
  - When remote: <https://berkeley.zoom.us/my/adrianleezoom>
  - Section 002: Tu/Thurs 8:10AM-9:30AM, 1 Physics North
  - Section 003: Tu/Thur 11:10AM-12:30PM, 1 Physics North
- Reading: Lectures will be a compliment to the assigned reading, not simply repeat what is covered in the book.

- Clickers: We will use clickers in lecture to facilitate interaction. Clickers are required and you will receive credit for participation only, not for correctness. (see details on grading below)

### Discussion Sections:

- DL sections meet twice a week for two hours EVERY week.
- 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.
- You must bring your workbook to your DL section.

### 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.
- Lab section will be EVERY week, and **on the weeks where there is no lab you will have a second discussion 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.
- **While remote, labs will be done by using recorded videos of the lab, and also makeup labs can be done using the videos.**
- **You must complete all the labs. One uncompleted lab will result in a reduction of your grade by 1/3 of a letter grade. You can't pass the class with more than one missed lab.**

### 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 on gradescope. 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: cheng98815 If your Cal SID # is incorrect you will not receive homework credit.

- **One of the written HW problems will be picked randomly and graded each week.**
- **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 comprehensive final. See the review and exam schedule also linked on Bcourses for times and locations.
- 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 3"x5" card (both sides) handwritten (or size 14 font or larger computer) notes for each MT and three for the final. You can have an equivalent area on a single sheet of paper (area = 3" x 5" x 2)
- Exams will include both conceptual questions similar to the clicker and workbook questions, as well as quantitative problems similar to homework problems.
- **Exam problems will be graded based on your solutions, not your answers. No credit will be given for correct answers without a clear reasoning and showing your work.**
- Exam Dates:
  - Section 2: MT1 Tu 2/22/22 7-9pm, MT2 Th 3/31/22 7-9pm, Final Th 5/12/22 7-10pm, exam group 16
  - Section 3: MT1 Th 2/24/22 7-9pm, MT2 Th 3/31/22 7-9pm, Final Th 5/12/22 8-11am exam group 13

### Clickers:

- Clickers are required for lecture. You will receive credit for participation only, not for correctness. You can use iclicker hardware or use a device such as your phone. There is a charge for using your device but it is less than for new hardware.
- Clicker participation is extra credit: your clicker percentage will replace 2 percentage points of your total exam weighting only if your clicker percentage is higher than your exam percentage. We will start using clickers on the second week of lecture, but we will start counting the extra credit in the third week of class.
- It is your responsibility to bring a functioning (with working batteries), properly registered iClicker (iclicker.com) to lecture every day.
- There are **NO** makeups for clicker questions. We will drop the lowest three days of clicker scores.
- You must register your clicker with your name and student ID through the iClicker website ([www.iclicker.com/support/registryourclicker/](http://www.iclicker.com/support/registryourclicker/)) to receive credit. If your iclicker is incorrectly registered you will not receive clicker credit.

### Course Center: 105 Physics South

- All GSI office hours are held in the course center.

- 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.

**Required Course Materials:**

- Textbook: Giancoli, *Physics for Scientists & Engineers*, Volume 1 (Custom Edition for UC Berkeley) It is drawn from the 4<sup>th</sup> edition of the book, and that edition is fine to use.
- Workbook/lab manual: 7A Workbook (bundled with text or available standalone at bookstore or digital version)
- online homework: Mastering Physics subscription
- clicker: iClicker Classroom Response System

**Grading:**

- The grade breakdown is the following:

Midterm 1	20%
Midterm 2	20%
Final Exam	35%
Homework + Lecture quizzes	10% 5%
Labs	10%

- Clicker participation will act as extra credit: if you're clicker percentage is higher than your total exam percentage, your clicker participation will count for 2% of your grade and your exams will count for 73% of your grade.
- We will drop your lowest two homework scores, lowest quiz score, and 3 lowest clicker scores.
- Your homework grade will be split 50/50 between mastering physics and written homework.
- The Lab score will have a small portion based on attendance in lab.
- 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.
- A grade of "Incomplete" is only given to students who have completed work that is at least "C" quality and are unable to complete the course due to circumstances beyond their control.
- If your performance improves during the semester, then that improvement will be taken into account for your final grade.

**Accommodations:**

- The Disabled Students' Program (DSP) is committed to ensuring that all students with disabilities have equal access to educational opportunities at UC Berkeley. If you need individualized services or accommodations for exams or other aspects of this course; if you have emergency medical information you wish to share with the instructor; or if you need special arrangements, please inform the professor and the head GSI immediately.

We may need several weeks before the scheduled exams to make appropriate arrangements, so please contact us as soon as possible.

### **Intellectual honesty:**

- The student body of UC Berkeley has adopted the following **Honor Code**. “As a member of the UC Berkeley community, I act with honesty, integrity, and respect for others.” Every student must adhere to this code. See <https://teaching.berkeley.edu/berkeley-honor-code>. You must also abide by the **Student Code of Conduct**, <http://sa.berkeley.edu/code-of-conduct>. Cheating on exams will absolutely not be tolerated.
- Reviewing lecture and reading materials, working practice problems, and studying for exams can be enjoyable and enriching things to do with fellow students. This is recommended. However, when you submit an answer to Mastering Physics, written homework, or an assignment to your GSI, you are stating that the answer/solution is your own work and not copied from a book, website, friend, or other animate or inanimate source. All exams (including quizzes) are to be independent efforts; collaboration or help from outside sources during the exam is considered **cheating** and will be treated very severely, most likely by your failing the entire course and by referral to the Student Judicial Affairs <https://conduct.berkeley.edu>

### **Sick Policy**

- Students who are sick, including Covid-19 isolation/quarantine, should not attend class or D/L section. Class lectures will be recorded throughout the semester and will be available on bCourse. For D/L sections and exams, students should send a request to be excused promptly.

### **Links to University Services**

- In the event of personal issues affecting your academic performance or if you are falling behind, PLEASE talk to me (or Newton) as soon as possible.

There are many resources available to help you, so we strongly encourage you to take advantage of them. Also, keep in mind that working with your peers and providing explanations to other students is an excellent way of improving your understanding of the course material.

- Academic Calendar and Student Accommodations - Campus Policies and Guidelines <http://teaching.berkeley.edu/academic-calendar-and-student-accommodations-campus-policies-and-guidelines> Should an exam or deadline fall on a cultural or religious holiday, and you wish to seek an accommodation, please email the Head GSI with your name and discussion/lab number with ample advance notice.
- Disabled Student Services <http://dsp.berkeley.edu/> DSP serves currently enrolled

UC Berkeley students with documented disabilities seeking undergraduate and graduate degrees. If you have a disability or think you may have a disability, you can work with DSP to request an official accommodation. DSP is located at 260 César Chávez Student Center. Students may call 642-0518 (voice), 642-6376 (TTY), or e-mail [dsp@berkeley.edu](mailto:dsp@berkeley.edu).

- Tang Center: Counseling and Psychological Services <https://uhs.berkeley.edu/counseling> CPS offers short-term counseling for academic, career, and personal issues. There is no charge to get started, and all registered students can access services regardless of their insurance plan. There is no charge to get started, and all registered students can access services regardless of their insurance plan.
- Path to Care <http://sa.berkeley.edu/dean/confidential-care-advocate> The PATH to Care Center provides affirming, empowering, and confidential support for survivors and those who have experienced gendered violence, including: sexual harassment, dating and intimate partner violence, sexual assault, stalking, and sexual exploitation. Confidential advocates bring a non-judgmental, caring approach to exploring all options, rights, and resources.
- Student Wellness Resources <https://wellness.asuc.org/> A partial directory outlining campus services that may prove useful throughout a student's time, ranging from direct academic assistance to student health and wellness resources.
- The Basic Needs Center <https://basicneeds.berkeley.edu/> provides support with all the essential resources (food, housing, etc.) needed to not only survive, but thrive here at UC Berkeley.
- Suggestions or comments about your courses, the department or your instructors can also be submitted anonymously via the Questions and Comments section of the physics departments' DE&I website: <https://physics.berkeley.edu/about-us/equity-inclusion/faq-on-sexual-harassment/submit-a-question>

### **Statement of Commitment to Equity and Inclusion**

- All individuals in the Department of Physics have the right to work and learn together in an environment free of harassment, exploitation, or intimidation. We seek to establish a classroom culture that nurtures the physics identity and removes barriers to entry to strengthen pathways into the field. Setting students on a path to envision themselves with a degree in physics and related STEM fields in greater numbers ensures more diverse graduating classes, more diverse graduate programs, and in turn has the potential to inspire a new generation of physicists. We strive to ensure these ideals are the core of our culture.
- Exams and assignments in this course are a diagnostic of your current skill levels, which can be improved with practice, and are not a measure of permanent ability. As a participant in this class, you can be proactive about making other students feel included and respected. We encourage you to approach your instructor or Student Services if:
- Your official records do not reflect your correct name and/or set of pronouns that you would like us to use.
- Your performance in the class is impacted by your experiences outside the class (e.g., family matters, current events); we would like to help you find resources to

- cope. See the Links to University Services below).
- Something was said in class (by anyone) that made you feel uncomfortable.

**Some final words of advice:** 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 Physics North) 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.**