

UC Berkeley Physics Department  
Physics 8A Course Information  
Fall 2016, Lecture 1 & 2

**Instructor:** Achilles Speliotopoulos ([ads@berkeley.edu](mailto:ads@berkeley.edu))

**Office Hours:** Tu 12:30 – 1:30PM, Th 1:30 – 2:30PM, F 4:00 – 5:00PM

**Office:** 386 LeConte

**Head GSI:**

Mike Yen ([mayen@berkeley.edu](mailto:mayen@berkeley.edu))

**Lecture 1:**

**Lecture:** MWF, 3:00 - 4:00pm, 1 Pimentel

**Exam Info:**

*Midterm 1:* Wednesday, October 5<sup>th</sup>

Location: 1,2,3,4 & 385 LCNT

*Midterm 2:* Wednesday November 2<sup>th</sup>

Location: 1,2,3,4 & 385 LCNT

*Final:* Tuesday December 13<sup>th</sup> 7-10PM,

Location: TBD

**Lecture 2:**

**Lecture:** TuTh, 11:00 – 12:30pm, 1 Pimentel

**Exam Info:**

*Midterm 1:* Thursday, October 6<sup>th</sup>

Location: 1,2,3,4 & 385 LCNT

*Midterm 2:* Thursday, November 3<sup>th</sup>

Location: 1,2,3,4 & 385 LCNT

*Final:* Wednesday, December 14<sup>th</sup>, 8-11AM,

Location: TBD

***\*\*Midterms will be 2 hrs exams scheduled between 7pm-9pm.\*\****

*Midterm 1 Review Sessions (both lectures):*

Saturday, 10/1/16	1-4 PM	2040 & 2050 VLSB
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Sunday, 10/2/16	1-4 PM	2040 & 2050 VLSB
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*Midterm 2 Review Sessions (both lectures):*

Saturday, 10/29/16	1-4 PM	2040 & 2050 VLSB
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Sunday, 10/30/16	1-4 PM	2040 & 2050 VLSB
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**Textbooks:**

The required textbook for the course are the following:

*Essential University Physics (with Masteringphysics access code) vol. 1, 3e by Wolfson, 2012*

*Physics 8A Student Learning Handbook*

**(Acceptable)** *Essential University Physics (with Masteringphysics access code) vol. 1, 2e by Wolfson, 2012*

*Prerequisites: Mathematics 1A, 10A, 16A, or equivalent, or consent of instructor*

The explanations and the examples provided in our textbook can be sparse and limited. Fortunately, there are a number of physics textbooks in print that cover—at least on a conceptual level—the same material that we will be covering this semester. These textbooks include the following.

Calculus-based:

“*Physics for Scientists and Engineers*,” D. C. Giancoli (Yes, this is the book used in the 7-series)

“*Fundamentals of Physics*,” D. Halliday, R. Resnick, J. Walker (What the 7-series used to use.)

“*University Physics with Modern Physics*,” H. D. Young, R. A. Freedman, A. L. Ford (A more advanced book than the others, but our textbook seems to be a condensed version of this one.)

“*Physics for Scientists and Engineers*,” R. A. Serway and J. W. Jewett

“*Principles of Physics*,” R. A. Serway and J. W. Jewett

Algebra based:

“*Physics: Principles with Applications*,” D. C. Giancoli

“*Physics*,” J. D. Cutnell, K. W. Johnson

The edition of these textbooks have been deliberately left out. The edition does not matter as much as how understandable and useful you find the author’s explanations.

**Attendance in the first two weeks:**

Be there! You must attend all of your discussion and lab sections during the first two weeks. Otherwise, you will be dropped from the course.

**Enrollment Changes:**

All enrollment changes have to be made through the university’s online system.

**Early Drop Deadline:**

September 2<sup>nd</sup>

**8A Course Center:**

The course center for Physics 8A is open during the day. It is located in **103 LeConte**, and it is there for students to work on physics, either in groups or by themselves. It is also in this office that the GSI’s will have office hours. You may attend the office hour of any GSI, and the office hour schedule will be posted.

**Grading:**

Your performance in this class will be based on the following categories and weights:

Midterm 1:	20%
Midterm 2:	20%
Final Exam:	40%
Homework:	10%
Discussion/Labs:	10%

Your grades in the course will be awarded based on the Department of Physics Grading Policy: Approximately 25% of the registered students in the class will receive an "A"; 40% will receive a "B"; 35% will receive a "C"; and a small number of students will receive a "D" or "F". The exact percentages will depend on the performance of the class as a whole during the semester.

In accordance with University policy, an "Incomplete" for the course will only be given under circumstances beyond a student's control, and only when work already completed is of at least C quality.

### **Discussion/Labs:**

There are two, two-hour, discussion/laboratory sections each week. These sections, and what is done during them, is tightly integrated into the course, and is designed to help you learn the material. For a good part of the time during the semester, you will be doing worksheets from the Physics 8A workbook. These worksheets are structured to talk you through problems, and are designed to help you learn the material. *Attending these discussion sessions, and completing the worksheet assigned is strongly recommended.*

For seven weeks, spread throughout the semester, you will be doing a laboratory assignment during one of the two discussion/laboratory session during that week. The write-ups for the assignments are from the workbook. Each laboratory is scored out of five points, and *you must complete six out of the seven laboratories, and receive a score of at least 17 out of a possible 35 points to pass the course.*

The lab schedule and lab policy is posted on bCourses.

On the weeks you do not have a scheduled lab, your GSI will be holding discussion in your lab room, either 211 or 231 LeConte.

### **Readings:**

Be prepared for lecture and section by reading the assigned sections in advance. Lectures and sections both assume that some of the basic material has been learned from the text already; you will be at a significant disadvantage if that's not true. Reading assignments are on bCourses.

### **Homework:**

Physics is a subject learned by doing, and at this level, the "doing" of physics means doing homework problems. It is exceedingly difficult for you to do well in the course unless you do the homework, yourself, without reference to solution manuals. You are encouraged to work with others on the homework sets; working together will allow you to discuss the problems with each other, and check each other's approaches and logic. Be certain, however, that each person in the group knows how to do the problems themselves, and understand the physics underlie the problem. If you come across problems that you do not know how to solve by yourself, it is highly recommended that you visit an office hour of a GSI or professor.

Generally, weekly homework assignments will be assigned on **Mondays**, and will be due the following **Monday at 11PM**.

*Late homework will not be accepted.*

### **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 online at the Mastering Physics site. Duplicate subscriptions will be deleted. **Your subscription SID must match your actual UC Berkeley SID to receive homework credit for the**

**course.** You can log on to our homework service at the following address:  
<http://www.masteringphysics.com>

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***
- **Lecture 1:**
  - Course Title: LEC-1-PHY8A-F16-SPELIO
  - Course ID: LECONESPELIOPHY8AF16
  - UC Berkeley Zip Code: 94720
- **Lecture 2:**
  - Course Title: LEC-2-PHY8A-F16-SPELIO
  - Course ID: LEC2SPELIOPHY8AF16
  - UC Berkeley Zip Code: 94720

Masteringphysics purports to be an online physics homework system, and thus by extension, it would seem that students should do their homework online, in front of the computer. You are discouraged for doing so. Rather, we strongly recommend that every week, after the homework is posted, you print out the homework from the computer, and then you go away from the computer and complete your homework assignment on paper. After you have completed the assignment, go back to the computer, and input your answers. Then, for those problems that you got wrong, go back to your written work and look to see where a mistake was made. Make sure that you write a coherent argument for each problem on your written solutions so that you can check your work. After you have completed a homework assignment, save your written solutions, and this way you will have a written record of how you did the homework problems that you can refer to later when studying for exams.

#### **Exams:**

A Cal ID with your picture is required at all exams.

You are required to take all exams. In the event of a significant emergency, i.e. non-trivial illness, death in the family, etc, you should contact me before the exam, or if this is not possible, immediately after the exam. ***The GSI's cannot excuse you from the exam.*** You will be required to provide documentation for your emergency, i.e. a doctor's note, etc.

#### **Accommodations:**

If you need disability-related accommodations in this class, if you have emergency medical information you wish to share with the instructor, or if you need special arrangements in case the building must be evacuated, please inform the head GSI immediately.

#### **Attendance:**

While it is not possible to take attendance, you are expected to attend the lectures. I will make announcements during lectures, and there can be material covered during lectures that is not in the book or are presented differently from the textbook. It is your choice whether you attend the lecture or not, but even if you choose not to do so, you will still be responsible for the material covered.

**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 find a way to help!