

Lecturer: Prof. Fiona Harrison 211 Downs x6601 fiona@srl.caltech.edu

Location: Tuesday/Thursday 1:00 – 2:30, 107 Downs

Office Hours: I will be available for questions Wednesdays, 2:00 – 3:00 and by appointment (e-mail to arrange a time). The TA's will also hold office hours to provide support for questions on homework.

Teaching Assistants: Yanbei Chen (yanbei@its.caltech.edu) 156 W. Bridge
Office Hours: 8:00 – 9:30 p.m. Wednesday
Yi Li (ylm@its.caltech.edu) 335 Lauritsen (office hours only)
Office Hours: 8:30 – 10:00 p.m. Tuesday
Federico Spedalieri (federico@its.caltech.edu) 250 Lauritsen
Office Hours: 3:00 – 5:00 p.m. Monday

Course Description/Text:

Physics 106c will cover electricity and magnetism and special relativity. The required text is Classical Electrodynamics, by J. D. Jackson.

Assignments/Grades: Your grade will be based on **hw (25%), midterm (25%), paper (10%), and final (40%)**.

Homework will be assigned each Thursday, *due the following Thursday*. Late homework will be accepted for 50% credit for up to 1 week (no credit for assignments more than 1 week late). You may arrange extensions with me or a TA *in advance* of the due date. ***Mark clearly on your paper who granted you the extension.*** Graded papers will be returned within one week. Copies of assignments will also be available at <http://www.srl.caltech.edu/phys106>. You may collaborate (and are encouraged to do so) on solving homework problems, and you may get help from me or the from TAs. The writeup of the problems must be your own (*no “handwritten Xeroxs” of someone else’s work!*).

Midterm The 1.5-hour midterm will be given in class on May 8. Note, if you cannot make this time, you must arrange an alternative time *well in advance*.

Term Paper 10% of your grade will be based on a term paper. This paper is to be either a journal-style article (i.e. containing an abstract, introduction, discussion, conclusion), or a popular science article (see the NY Times Science Times feature stories for examples). You are to take some topic relevant to E&M or special relativity, and expand it into a research paper. Note, this is not intended to be original research. You are to study some topic in depth, writing it up as if you had done the original research. It can also be historical. Examples of topics are: electrode configurations on solid state detectors, ionization chamber detectors, particle accelerators, a history of the ether in special relativity etc.. You are to turn in an abstract with your suggested topic and title by May 3. The page limit is 5 pages, single spaced, 12 pt type.

Final Exam There will be a final exam due June 7 for seniors and graduate students, June 13 for undergraduates.

Important Dates

April 12	Homework 1 due
April 19	Homework 2 due
April 26	Homework 3 due
May 3	MIDTERM EXAM, 1:00 – 2:30 p.m. 107 Downs
May 8	Paper topics/abstracts due in class
May 10	Homework 4 due
May 17	Homework 5 due
May 24	Homework 6 due
May 31	Last lecture Homework 7 due
June 5	Final review session (during lecture) Papers due
June 7	Final exam due