Physics7B, summer 2015

"A syllabus (headnote) will be released .. for the convenience of the reader" (US Supreme Court docs)

syllabus: heat, electromagnetism

syllabus: the table of contents for Giancoli chs 17-31

…except we will omit some few sections (announcing the fact as we reach them) & add a topic or two, as will become apparent in time (i reserve the right to adjust content in light of how rapidly or otherwise you absorb it). To help you study, I'll post a scratch list of topics a week before each exam.

syllabus & schedule: if you are from another place, and need to have this course accepted by your registrar, let me know, and I'll supply an appropriate document.

schedule: I'm afraid I do not decide in advance precisely which specific subtopics will be covered on which day: we will be pressed to cover chs 17-31 and our actual pace will depend, in part, on you. In practice, few lecturers complete the study of electromagnetic waves, and that topic often leaks into 7C. However, I do myself expect to derive their existence (& in differential form) within 7B.

evaluation: there will be three midterms, each counting, as we agreed, 25%, labs counting 10%, and homework 15%. Each mid-term will cover only the previous third of the course, except that in the last mid- term there will be an opportunity provided for (only) those who have failed an earlier midterm, to bring that midterm up to passing level.

Subject to confirmation during week one, the first midterm will be on Thursday of week 3, and cover the first 9 lectures. The date of the second midterm is not yet fixed. The final mid-term is the last thursday of class. Each mid-term takes place in LeConte 4 (unless otherwise announced) and at the time of the lecture it replaces.

You are presumed to be present & thus (or otherwise) to have received any information (time changes, for example) announced during a lecture. We may or may not also employ electronic means.

Homework will be assessed using Mastering Physics; the course ID is PHY7BSU15 . We wish strongly to encourage you to work together (the course room, 107 LeConte, is a good place for this), and to learn by making mistakes – though preferably not too many ;-) . We will drop your weakest MP assignment, and count 80% (or above) success in the remainder as the maximum score (so 40% counts as 50, &c). This way, you will find yourself penalised only if you fail to make a decent attempt at this section of the course; my research tells me that the attempt is a stronger indication of future success than your present perfection. Therefore (as always) approach this exercise in a spirit of learning, rather than finding means to guaranteeing a perfect score. Understandably, if someone gets 100% in the online homework, and zero in an exam, I

must reserve the right to sceptically discount their homework grade.

You are required to pass all five of the scheduled experimental labs (you must warn your GSI if you cannot attend, and arrange for makeup). Which days these take place will be announced very soon.

Though the professor legitimately has the authority for directly determining your letter grade, in practice he or she will be focussed on gauging the quality of work in order to set letter boundaries, and your personal ranking will always be preserved. Personally, I do not see the logic of grading on a curve, and I don't; however, the law of large numbers assures that ultimately the distribution will be close to recent department norms.

discussion & lab sections: lectures alone provide very little practice in solving problems. do be proactive in seeking answers from GSIs, and from your peers. the lab room is used as a discussion/workshop class when not actually supporting an experiment. more on labs later (yes: in lecture). thus you are officially provided a class context MTWR. I have never in Berkeley had a physics TA or GSI who was less than excellent, and extremely well-informed: that is quite a privilege for you, so use them while you can.

course room: LeConte 107 is generally open, and I strongly recommend you join, indeed collaborate with the others working there. instructors may poke a helpful nose in from time to time.

I shall maintain the following web page, at to hold 'handouts' and course information:

mikebloxham.com/7B

We may well use bCourses; if so, this will be announced (in lectures, as always).

good luck (?), and email me any queries you may have.

mike_bloxham@redlands.edu (where I used to teach) will get the promptest response, but if you send anything but the smallest attachment, my personal address for this purpose is m.boudu@gmail.com

do not use mbloxham@berkeley.edu : it vanishes from time to time.

last updated: jun 22