Physics 13 is the second half of introductory physics, primarily for biological science and earth and environmental science students. Subjects include electricity and magnetism, light, quantum mechanics, atoms, and the nucleus. Prerequisites: PHY 10/11, and MATH 21/31/51.

Time and Location

Lectures: Monday and Wednesday, 08:10-09:00 LL 316
Recitation: Friday, as assigned by the Registrar, LL 311
Office hours: Tuesday 18:00-19:00 and Thursday 15:00-16:00 (subject to change)

Textbook

Required: Wolfson, Essential University Physics volume 2, 2nd edition, Addison-Wesley 2011, with access to Mastering Physics. ISBN: 0321711742. (Note: It is much cheaper if you buy the book together with the Mastering Physics code.) The course ID in Mastering Physics is: MPVAVYONIS2013

It will be useful to keep your Physics 10 or 11 textbook as reference.

Lecture Notes and Course Site

Lecture notes and other announcements, such as updated office hours, will be placed on Course Site. These notes do not replace the textbook. Some assigned material will not be presented in lectures; you will be expected to learn this material through your own reading and through homework problems.

Clickers

Clickers from Turning Points will be an integral part of class. They will be used for quizzes and for other interactive activities. Each student must register a personalized clicker as described in the announcement posted on Course Site.

Grades

Upon satisfactory attendance, the course grade will be based on:
1. **Final exam (45%).**

2. **Two one-hour exams (30%).** There will be no make up on hour tests. If you miss an hour test for a valid reason, your grade on the corresponding part of the final examination will be substituted for the missing grade.

3. **Homework (20%).** Weekly homework assignments will consist of:
   - Online homework set through Mastering Physics. This will be due by the end of Thursday and it will cover the material of the Monday and Wednesday lectures. There will be no penalty for time or use of hints. Late submissions however will result in partial loss of credit.
   - Assignments by Dr. Ryan.

4. **In-class Quizzes (5%).** Reading assignments will be announced in class. In-class quizzes will be graded as follows: Correct Answer: 2pts; Wrong answer: 1pts; No answer: 0 pts. The quizzes will be done using clickers. Quiz questions will be clearly marked and the system will record your individual response. In all other cases your individual response will not be recorded (anonymous mode).

**Pay Attention to Academic Integrity**

Copying homework answers from other students, looking up Mastering Physics answers on the web, providing answers to homework questions to other students are examples of behavior not consistent with the University’s expectations on academic integrity.

**Course Outline**

The following is an outline. Excluded sections will be announced in class and on Course Site. *This is an intensive course and you are expected to attend all classes.*

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Accommodations for Students with Disabilities: If you have a disability for which you are or may be requesting accommodations, please contact both your instructor and the Office of Academic Support Services, University Center C212 (610-758-4152) as early as possible in the semester. You must have documentation from the Academic Support Services office before accommodations can be granted.