Lectures: Tuesdays and Thursdays, 9:00–10:15 AM in Sequoia 130

Instructor: Dr. Jerome Buerki
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The best way to contact me outside of class is by email.

Course Website: https://online.csus.edu/webct/

Reading the text is essential. It’s best if you read the section of the book we will be covering any given day before we discuss that material in class.

Office hours: Tuesdays, 1:00–2:50 PM, in Sequoia 432
or by appointment.

Midterms: 2 midterm exams, around early-to-mid March, and mid-April, exact dates TBD
Final exam: Tuesday, May 19, 8:00–10:00 AM, probably in Sequoia 130.

Course content: In this course, we will develop the electromagnetic theory from basic experimental laws; in particular, we will cover electrostatics, electric currents, magnetostatics, electric and magnetic properties of matter, induction, Maxwell’s equations, conservation laws, introduction to electromagnetic waves.

Prerequisites: The following courses must have been passed prior to attending this class:
MATH 45: Differential Equations for Science and Engineering
PHYS 11C: General Physics: Electricity and Magnetism, Modern Physics
PHYS 105: Mathematical Methods in Physics.

Course objectives:

• Understand the origin and derivation of the electromagnetic theory;

• Know the laws of electromagnetism;

• Be able to solve problems using Maxwell’s equations;
Lectures:
Lectures will be divided between formal lecture, discussion, example and problem solving. Attendance is not mandatory, but highly recommended.

Homework:
After the first few weeks that will be used to acquire a sufficient amount of theoretical background, homework will be assigned regularly, more or less on a weekly basis, to reinforce the material covered in class. Assignments will be made available online on SacCT. The due date will be indicated on the homework, and will be about a week after it is made available. Solutions will be posted on SacCT after the lecture on which the homework is due. Late homework will not be accepted. Homework might be only partially graded.

Exams:
There will be two one-hour exams counting for credit, and one two-hour final exam. A typical exam will consist of a number of short-answer questions and a few longer problems to be worked out. Any subject matter covered in lectures and homework may be included.
The one-hour exams should take place around early or mid March, and mid April, and cover the material discussed in class up to about a week before the exam. The exact dates and chapters covered in the one-hour exams will be announced at least two weeks in advance. If you have a conflicting activity that cannot be rescheduled, you must see me at least two days before the exam. If you don’t come see me before the exam, there will be no opportunity to make it up. You must bring me documentation of your conflicting activity.
The exams will be closed book and closed notes, but you will be allowed one letter-size, single-sided, hand-written note sheet.
You are allowed a scientific calculator, but nothing may be programmed on it. I reserve the right to clear the memory of your calculator prior to or during the exams. No PDA or Phone based calculators are allowed.
Use of cell phones and PDAs is prohibited during the exams, and all rings must be muted!
If you are expecting an important phone call, let me know before the beginning of the exam.
The final exam follows the same rules, but is two-hour long and you will be allowed a two-page note sheet. It is comprehensive, but will be somewhat weighted to the material covered after the last one-hour exam.
Grades:
Credit for the various components of the course are as follows:

- Hour exam #1: 25%
- Hour exam #2: 25%
- Final exam: 35%
- Homework and quizzes: 15%

Letter grades will be assigned approximately as follows:

- A: 90–100%
- B: 77–89%
- C: 66–76%
- D: 55–65%
- F: 0–54%

However, I will take into consideration the distribution of scores prior to making a final decision.

Cell Phone Policy: Please turn your cell phone to vibrate before class starts. Cell phones that ring in the middle of class are disrespectful to your fellow students and to me. If your cell phone goes off in class and it is a call that you must take, please go into the hallway to answer it.

Academic Dishonesty Statement:
The Department of Physics and Astronomy has unanimously approved the following statement: “The faculty of the Department of Physics and Astronomy will not tolerate academic dishonesty. Falsification of data, copying, unauthorized collaboration, plagiarism, alteration of graded materials, or other actions (as described in, but not necessarily limited to the Sacramento State Policy Manual) will be promptly reported to the Office of Student Affairs. The offending student will be penalized on the assignment in question. Serious infractions will result in course failure and a recommendation for administrative sanctions.”
If you have any questions regarding this statement, please come and speak with me about it.

Additional Information:
If you have a disability and require accommodations, you need to provide disability documentation to SSWD, Lassen Hall 1008, 916-278-6955. Please discuss your accommodation needs with me after class or during my office hours early in the semester.