

**Physics 4B**  
**Physics for Scientists and Engineers**  
**Electricity and Magnetism**  
Winter 2020

Lecture MTWRF 9:30am – 10:20am, S11

Instructor:

Kasra Khazeni

Office:

S13

Contact:

email: khazenikasra@fhda.edu

Office Hours:

10:30-11:00 am T, Th

Text:

Physics for Scientists and Engineers, 9th edition, by Serway and Jewett

Objective:

The purpose of this course is to introduce the concepts of electricity and magnetism. This course relies heavily upon setting up integration problems (and solving them) and vector analysis. It also develops the basic equations of electricity and magnetism referred to as "Maxwell's Equations" as well as elementary (DC and AC) circuit analysis using Kirchoff's Laws.

Please turn off all cell phones/iPods/computers or similar devices while in class. No cell phone use during exams. You will require a SIMPLE calculator with scientific notation; NO SHARING of calculators during exams/quizzes will be permitted.

Quizzes:

There will be one quiz every other week. No makeup quizzes will be permitted.

Exams:

There will two exams 1/3 and 2/3 into the quarter. No makeup exams will be permitted.

Cheating Policy:

Cheating on a quiz, or the final, will result in an automatic "F" on that test, with two incidents of cheating resulting in an automatic "F" in the class.

### Homework:

Suggested problems from the book will be assigned at the end of each chapter, which will not be required to be turned in, but it is strongly suggested that you work them out and become comfortable with recognizing the type of problem it represents and its solution. Working out the HW problems is one of the best ways to be prepared for the weekly quizzes and the final exam. Please feel free to come and see me to discuss homework problems if you have any questions.

### Grading:

Final grade:

88% - 100% = A  
76% - 88% = B  
64% - 76% = C  
50% - 64% = D

Breakdown of the final grade:

Quizzes = 30%                      1/2 hour, 1 or 2 problems, one quiz every other week  
Exams = 25%  
Lab = 15%  
Final = 30%

There are no make-up exams, quizzes, or the final.

**Student Learning Outcome(s):**

\*Critically examine new, previously un-encountered problems, analyzing and evaluating their constituent parts, to construct and explain a logical solution utilizing, and based upon, the fundamental laws of electricity and magnetism.

\*Gain confidence in taking precise and accurate scientific measurements, with their uncertainties, and then with calculations from them, analyze their meaning as relative, in an experimental context, to the verification and support of physics theories.