

**Physics 4B, sections 35, 48**  
**Physics for Scientists and Engineers**  
**Electricity and Magnetism**  
Fall 2022

Lecture, MW 5:30pm – 7:45pm, Room S35  
Lab sections 35&48, W 7:55pm – 10:45pm, Room S17 with Professor Ronald Francis

Instructor:

Kasra Khazeni

Office:

S13

Contact:

email: khazenikasra@fhda.edu

Office Hours:

On Zoom Fridays through Canvas

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 develops the basic equations of electricity and magnetism as well as elementary (DC and AC) circuit analysis using Kirchhoff's Laws.

You can use either your cell phone, iPad, or computer for online instructions. No personal cell phone use during exams. You will require a SIMPLE non-graphing calculator with scientific notation.

Please turn off all cell phones/iPods/computers or similar devices while in class. No cell phone use during exams. NO SHARING of calculators during exams will be permitted.

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, midterms, and the final exam. Please feel free to come and see me to discuss homework problems if you have any questions.

Quizzes:

There will be approximately one quiz every week CLOSELY related to the homework assignments. No makeup quizzes will be permitted. Instead, the lowest quiz grade will be dropped at the time course grades are being determined.

Exams:

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

Cheating Policy:

Cheating on an exam will result in an automatic "F" on that exam, with two incidents of cheating resulting in an automatic "F" in the class.

Grading:

Final grade, based on a curve of the whole class:

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

Breakdown of the final grade:

Quizzes = 30%                      1 or 2 problems, approx. one quiz every week  
Exams = 25%  
Lab = 20%  
Final = 25%

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.