

## DE ANZA COLEGE – PHYSICS 4B – WINTER 2021

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<b>Instructor:</b>	Eduardo Luna
<b>Email:</b>	<a href="mailto:lunaeduardo@fhda.edu">lunaeduardo@fhda.edu</a>
<b>Homepage:</b>	<a href="http://faculty.deanza.fhda.edu/lunaeduardo">http://faculty.deanza.fhda.edu/lunaeduardo</a>
<b>ZOOM Office Hours:</b>	MTWTH 2:30 –3:30PM, F 8:30 – 9:30AM. Instructor will provide ZOOM link for office hours.
<b>Lecture Hours:</b>	M-F 9:30-10:20AM
<b>Lab Hours:</b>	TTH 10:30-1:20PM
<b>Final Exam Date:</b>	Tuesday, March 23 from 9:15 – 11:15AM
<b>Text:</b>	Physics for Scientists and Engineers (Vol. 2), 9 <sup>th</sup> Edition, Serway/Jewett
<b>Required:</b>	Casio FX-300MS, TI – 30XIIS, TI-30Xa, or equivalent
<b>Prerequisites:</b>	Physics 4A and Mathematics 1B with C or higher. Student must also be enrolled in Mathematics 1C or already have completed it.

**Note: Last day to drop a class with a “W” is Monday, January 18. Students who do not drop by this date will be given the appropriate grade for their achievement in the class at the end of the quarter.**

### **OBJECTIVE**

This is a calculus-based course in Classical Electromagnetism. The main objective of the course is for the student to understand the laws, theories and principles of Classical Electromagnetism in order to be able to understand and describe the electromagnetic interaction for different systems. The foundation laws of Classical Electromagnetism are Maxwell's Equations. Thus, we can equivalently state that the main objective is for the student to learn and understand Maxwell's Equations from a conceptual and practical viewpoint.

### **ATTENDANCE**

You are expected to be in class at the beginning of each class for the rest of the quarter. In order to help you review for the quizzes and exams, the lectures will be recorded on ZOOM and posted on Canvas on a weekly basis. If you stop attending class for any reason, it is your responsibility to ensure being dropped or withdrawn from the course in order to avoid an “F” in the class.

### **HOMEWORK**

Homework will be assigned on a regular basis but will NOT be collected. **However, it is your responsibility to have the homework completed before the following lecture.** It is essential to your success in this course that you put a solid effort into the homework. This is how you will learn physics and succeed in the class. (The quizzes you will be taking will generally be based on the homework problems assigned). If you are having difficulties with the class/homework, here are some things that I recommend to help you succeed in the class:

1. Ask for help during class and attend office hours.
2. Work together and discuss problems with other students in the class
3. Math & Science Tutorial Center.

On the homework, quizzes, as well as on the exams, you need to show all your work in complete detail in order to receive full credit. Your solutions should show your step-by-step process and logic that was used to obtain the answer. **No credit will be given if no work is shown even if you obtain the correct answer to the problem.** Answers to homework even problems are posted on the class homepage.

### De Anza College Academic Integrity

"The following types of misconduct for which students are subject to disciplinary sanctions apply at all times on campus as well as to any-off campus functions sponsored or supervised by the college: cheating, plagiarism or knowingly furnishing false information in the classroom or to a college officer"

### QUIZZES

There will be a quiz every Friday, the last 25 min. of class. The quizzes will be available on Canvas from 9:55AM – 10:20AM. This is the time you have to take the quizzes and then upload them into Canvas. The quizzes will generally be based on homework and lecture material for the corresponding week. Therefore, it is to your advantage to attend every lecture and have **ALL** the homework completed. If you miss a quiz, you will get a **ZERO** for that quiz. **NO MAKE-UP QUIZZES!** Lowest quiz score will be dropped at end of quarter.

### EXAMS

There will be three 50 minute in-class exams and a comprehensive lecture final. Exact dates for exams will be given at least four days prior to each exam. The exam format may be work-out problems, multiple-choice, conceptual, or a combination of the three. Only one of the listed calculators can be used during the exam. The key to the success on the exams is preparation; **DO THE HOMEWORK**, attend the lectures, read the textbook and make sure you understand it, and ask questions if you don't understand. **There are no make-up exams.** If you miss an exam you will get a **ZERO** for that exam. At end of quarter I will take the average of the lowest and highest exam score and replace the lowest with the average. You must take ALL 3 exams in order to replace the lowest exam score with the average!

Note: If there is a dispute in the grading of any quiz or exam, I will consider looking at them a second time **only** if it is handed back to me **within 2 school days** after I return them.

### GRADING

Grades will be based on the following components with the weights shown:

Quizzes	15%
Lab	17%
Exam 1	17%
Exam 2	17%
Exam 3	17%
Final Exam	17%

Grades will be determined as follows:

88% ---> 100%	= A
76 %---> 87%	= B
65% ---> 75%	= C
54% ---> 64%	= D
0 ---> 53%	= F

**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.