

# Physics 4B

Student video required

**Winter 2021**

**Instructor: David Newton**

**Email: [newtondavid@fhda.edu](mailto:newtondavid@fhda.edu)**

**Web Site URL: <http://nebula2.deanza.edu/~newton> (in addition to Canvas)**

**Office hours:** Monday no office hour, Tuesday 2:30-3:20 pm, Wednesday 10:30 -11:20 am, Thursday 2:30-3:20 pm, Friday, 11:00 am - 11:50 am.

**Final exam date:** Tuesday, March 23rd, 1:45 pm to 3:45 pm. Finals will not be given earlier or later.

**Text:** Physics for Scientists and Engineers: by Serway, edition... whatever you want.

**Prerequisites:** Passing Physics 4A and at least concurrent enrollment in Math 1C.

The goal of this course is to understand the four Maxwell equations of classical electro-dynamics in integral form and the "Lorentz force" equation and solve problems using them.

- It is the student's responsibility to drop the class if necessary. Otherwise, an F grade will be assigned.
- Grading mistakes, or protests for exams and quizzes will *only* be considered when a written cover letter is submitted to your instructor with the exam or quiz in question. Your appeal will be considered, and the resultant decision will be final. No protests will be considered orally, this includes simple addition errors.
- A grade of zero points will be assigned to any work done if a student has been found cheating.
- Grades will be given on the percentages as shown below:

**A: 92-100%;**

**A-: 90-91%**

**B+: 88-89%**

**B: 82-87%;**

**B-: 80-81%**

**C+: 78-79%**

**C: 60-77%;**

**D: 50-60%;**

**F: lower than 50%.**

**Overall class scores may be curved to fit this pattern.**

**The grade distribution is as follows:**

**Lab 10% (Attendance absolutely required.) Lab quizzes on Friday toward the end of the class period.**

**Big Quizzes 40% (eight pages of exams spread out, given one at a time)**

**Small Quizzes 35% many quizzes (of different natures perhaps), where their sum total will be normalized to be worth 35 points out of 100 for the final grade calculation.**

**Final 15% (3 to 5 exam style problems, comprehensive)**

**Lab Policy: Lab attendance is mandatory. You may miss *no* labs without a *written* physician's note or some other documented and serious reason. If you miss two labs even with a “justified” excuse or just one unexcused lab you will be liable for an instructor initiated drop from the entire course.**

**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.