

# De Anza College Physics 4A Syllabus

## Spring 2023

### Course Details:

Lecture: M-Th 1:30pm-2:20pm S32 and Friday Online via Zoom

Lab: Tuesday/Wednesday 2:30pm-5:20pm S11

6 units

**Instructor:** David Laubner

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

This is the best way to reach me!

### Office Hour:

Tuesday 10:30am-11:20am or by appointment

### Text:

Physics for Scientists and Engineers (Vol. 1), 10th Edition, Serway/Jewett

A PDF online copy of the textbook is fine unless you prefer a physical copy. I will be working from the 10th edition, but you are welcome to use an earlier edition if that is more accessible to you.

### Course Description:

This course will serve as an introduction to the laws and theories of classical mechanics. The topics that we will cover include kinematics in one and two dimensions, vectors and how they relate to the physical world, Newton's laws of motion, conservation of energy and momentum, including both linear and angular momentum, rotational mechanics, gravitation, and oscillatory motion.

### Learning Outcomes:

The goal of the course is to understand the laws of motion both conceptually and practically, in order to better understand the world around us. Problem solving will strengthen critical thinking, careful analysis, and logical evaluation.

## **Homework:**

Homework will be submitted online via Expert TA. Late homework will be accepted with deductions on a question-by-question basis. Late questions will receive a 10% per day penalty. For example, if you submit 8 out of 10 questions on time, then you will receive full credit for that question. If you submit the other two questions two days later, then 20% of your score will be deducted from those questions only.

## **Labs:**

Physics labs are an essential way to supplement your understanding of what you are learning in class. Be sure to keep an organized, legible lab notebook. You will receive a syllabus for the lab portion of the course, which will specify expectations regarding your lab notebooks, and the lab final.

Attendance of labs is mandatory. Communication in advance should be given prior to any labs that must be missed. Absences will be excused for extenuating circumstances at the instructor's discretion. Two or more unexcused absences may result in being dropped from the course.

## **Quizzes:**

Approximately once per week, I will assign a short quiz with questions about the topic that we are learning about that week. This is to enhance your learning and understanding of the material. These will be online, and you will have as many chances as you need to complete them.

## **Exams:**

There will be two 50-minute midterms and one comprehensive two hour final exam. **There are no makeup exams.** Missed exams will receive a score of 0. The key to success for the exams is preparation. This includes attending and engaging in lectures, reading and understanding the textbook, **asking questions** when you don't understand something, doing the assigned homework, and practicing solving problems. You may use a calculator on an exam, such as a scientific or graphing calculator. However, a phone may not be used as a calculator for exams. I will

provide an equation sheet with relevant equations for the exams, including the final. The format of the exams will include both multiple choice and free response questions.

**Academic Integrity:**

The work that you submit must be your own. Cheating will result in a score of 0 for the assignment or exam in question. Further action will be taken for subsequent incidents of cheating.

**Accessibility:**

It is my firm belief that physics is a subject that everyone should have equitable access to learn. If at any point you feel as though you need additional support, academic or otherwise, or something is hindering your learning, then please let me know. Accommodations will be made for those with the appropriate paperwork.

**Course Grade Distribution:**

Homework	20%
Labs	15%
Quizzes	5%
Exam 1	17.5%
Exam 2	17.5%
Final Exam	25%

**Letter grades will be determined approximately in the following manner:**

85% and above	A
75% - 85%	B
65% - 75%	C
55% - 65%	D
Below 55%	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 mechanics.

\*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.

**Office Hours:**

T	10:30 AM	11:20 AM	In-Person	S13
TH	10:30 AM	11:20 AM	In-Person	S13