

**Physics 4C**  
**Physics for Scientists and Engineers**  
**Fluids, Thermodynamics, Oscillations, and Optics**  
Spring 2023

Lecture: MW 5:30pm – 7:45 pm, Room S34  
Lab: W 7:55 pm – 10:45 pm, Room S11 with Professor Igor Tchertkov

Instructor:

Kasra Khazeni

Office:

S13

Contact:

email: khazenikasra@fhda.edu

Office Hours:

12:30 pm-1:30 pm, T, TH

Text:

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

Objective:

This is a calculus-based physics class. Physics 4C covers fluid mechanics, thermodynamics, mechanical oscillations, and optics. Students need to have a strong background in algebra, trigonometry, geometry, and some knowledge of calculus.

You will require a SIMPLE non-graphing calculator with scientific notation.

Please put away your cell phones/iPods/computers or similar devices while in class. No cell phone, computer, or iPad 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 and the exams. Please feel free to come and see me to discuss homework problems if you have any questions, or email me with your questions.

Quizzes:

There will be one quiz every week BASED on the homework problems assigned. 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 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 a quiz, exam, 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.

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%                      1/2 hour, 1 or 2 problems, 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 waves, fluids, optics, and thermodynamics.

\*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,TH 12:30 PM 01:30 PM In-Person S13