

**Physics 4B**  
**Physics for Scientists and Engineers**  
**Mechanics**  
Winter 2021

Online Lecture MTWRF 9:30am – 10:20am  
through Canvas, Zoom

Instructor:

Kasra Khazeni

Office:

Online

Contact:

email: khazenikasra@fhda.edu

Office Hours:

To be announced on the first day of class

Text:

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

Objective:

This is a calculus-based physics class. Physics 4A covers Newton's laws of motion, work, energy momentum, rotation, gravity, and oscillations. Students need to have a strong background in algebra, trigonometry, geometry, and some knowledge of calculus.

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 calculator with scientific notation; Exams will be live online while we are all in session on Zoom, with both microphones and cameras turned on. I need to be able to see you work on your exam.

Quizzes:

There will be one quiz every week. 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, 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. Since everything is online, it is easy for an instructor to detect cheating. Please be advised that here are various online tools and search engines for that purpose, along with sites that can easily be checked for uploaded exams and questions such as Chegg. Chegg will, upon request by me, share the information of anyone who uses it to cheat , including the IP and MAC addresses of the devices used.

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

### Grading:

Final grade:

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

Breakdown of the final grade:

Quizzes = 45%                      1/2 hour, 1 or 2 problems, one quiz every week  
Exams = 20%  
Lab = 15%  
Final = 20%

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 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.