

DE ANZA COLLEGE – PHYSICS 4A – SPRING 2025

Administrative

| | |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Instructor | Mehmet Artun |
| Email | artunmehmet@fhda.edu |
| Homepage | https://www.deanza.edu/faculty/artunmehmet/ |
| Office | Science and Technology Village |
| Office Hours | M 12:30 PM → 1:20 PM S55 W 2:30 PM → 3:20 PM S55 |
| Lecture Hours | MTWR: 1:30 → 2:20 PM (Room S32 - Secs 03Y, 04Y), F 1:30 PM → 2:20 PM Online (Zoom link on Canvas) |
| Lab Hours | M 2:30 PM → 5:20 PM (Room S11 - Sec 04Y) T 10:30 AM → 1:20 PM (Room S11 - Sec 03Y) (Prof. Eduardo Luna) |
| Final Exam Date | 24 June 2024 |
| Text | Physics for Scientists and Engineers (Vol. 1), 9th Edition, By Serway/Jewett |
| Required | Casio FX-300MS, TI – 30XIIS, TI-30Xa, or equivalent |
| Prerequisites | Physics 50 with a grade of C or better, or the equivalent (including high school physics); Completion of Math 1A with a C or higher and concurrent enrollment in Math 1B (or already completed). |
| Note | Last day to drop a class with a “W” is Friday, May 31st. 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 course delves into Classical (Newtonian) Mechanics with a foundation in calculus. The primary aim is to enable students to comprehend the laws, theories, and principles governing Classical Mechanics, facilitating their ability to articulate the motion of a system and thereby gain a deeper insight into the physical world. The fundamental laws in this realm are Newton’s Laws of Motion and the primary goal is to get an understanding of these laws and be able to apply these laws to analyze physical phenomena.

Classical Mechanics is typically segmented into two components:

- **Kinematics** – Involves detailing the motion of an object without considering the forces propelling it. This includes the examination of object motion in both 1-D and 2-D.

- **Dynamics** – Encompasses elucidating the motion of an object in relation to the forces influencing it. Newton's Laws of Motion are employed to articulate the motion of an object (system) considering the acting forces.

During the exploration of kinematics, the course covers the analysis of particle motion in 1-D and 2-D. In the dynamics section, students learn to dissect the motion of a particle (system) by applying Newton's Laws of Motion, along with other formulations such as the Work and Kinetic Energy Theorem, Conservation of Energy, Linear and Angular Momentum. The course also delves into the Law of Gravity as part of the discussion.

Homework:

You'll receive regular homework assignments to help you master physics. While I won't collect them, completing them before each lecture is **essential** for your success. These problems are key to understanding the material and acing quizzes, which are often based on them and the lectures.

Need a Hand with Homework?

- **Ask questions!** Don't hesitate to participate in class discussions or visit me during office hours.
- **Team Up!** Collaborate with classmates and discuss the problems together.
- **Tutoring** The Math & Science Tutorial Center is a valuable resource.
- Answers to selected questions are available online

Show Your Work, Earn Full Credit!

This applies to homework, quizzes, and exams: **always show your work for full credit!** Display your thought process step-by-step. Just getting the right answer isn't enough; you need to demonstrate how you arrived at it. The homework is a good place to practice showing your work.

Attendance

Regular attendance is key to your learning! If you need to stop attending, withdrawing before the deadline ensures you avoid an "F" and can focus on your other commitments.

Policies

De Anza College Academic Integrity Policy

"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"

Violating the Academic Integrity Policy will result in a grade of "F" in the class and the incident will be reported to the college disciplinary office.

Disruptive Behavior Policy

Any DISRUPTIVE BEHAVIOR during class will NOT be tolerated. If a student is in any way disruptive during the class, the student will be given a warning. If the problem continues, the student will be asked to leave the class and a formal disciplinary report will be filed with the college disciplinary officer. The incident will be recorded in your college record and will be sent with your transcripts to any university/college requesting student records.

Electronic Device Policy

The only electronic devices allowed in class are calculators and phones. The use of laptop computers is NOT allowed during class. Phones need to be set in 'silent' mode to avoid disturbing other students in the class. Phones or any other electronic device cannot be used to take video of any lecture material during class. Note-taking electronic devices are permitted with the instructor's prior permission.

Assessments

Quizzes

- We will have 3 quizzes
- There will be no quiz if there is a midterm exam during that week.
- Quizzes will be generally based on the recent material covered in the class or in homework.
- Missing a quiz means you will get a ZERO for that quiz. **No Makeups!**
- Your lowest quiz score will be discarded in the grade calculation

Exams

- Two in-class exams, each lasting 50 minutes. Specific dates will be announced at least 4 school days in advance (tentative schedule below).
- One final exam lasting 1h50 minutes.
- Exams may include problems to solve, multiple-choice questions, conceptual questions, or a mix of these.
- Only approved calculators are allowed during exams.

Keys to Success:

- Complete your homework assignments.
- Attend all lectures.
- Read and understand the textbook material.
- Ask questions if anything needs to be clarified.

Important Notes:

- No make-up exams are offered. Missed exams will result in a score of zero.
- Grading disputes: I will reconsider grades on quizzes and exams if brought to my attention within 2 school days of receiving them.

Grading

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






- Quizzes 15%
- Lab 20%
- Exam 1 20%
- Exam 2 20%
- Final Exam 25%

Grades will be determined as follows:

| Letter Grade | Range |
|--------------|------------------|
| A | 100% to 93.5% |
| A- | < 93.5% to 87.5% |
| B+ | < 87.5% to 83.5% |
| B | < 83.5% to 79.5% |
| B- | < 79.5% to 74.5% |
| C+ | < 74.5% to 69.5% |
| C | < 69.5% to 64.5% |
| D+ | < 64.5% to 60.5% |
| D | < 60.5% to 56.5% |
| D- | < 56.5% to 52.5% |
| F | < 52.5% to 0% |

Calendar

| APR | | | | | MAY | | | | | JUN | | | | |
|-----|----|----|----|----|-----|----|----|----|----|-----|----|----|----|----|
| M | T | W | Th | F | M | T | W | Th | F | M | T | W | Th | F |
| 31 | 1 | 2 | 3 | 4 | 28 | 29 | 30 | 1 | 2 | 2 | 3 | 4 | 5 | 6 |
| 7 | 8 | 9 | 10 | 11 | 5 | 6 | 7 | 8 | 9 | 9 | 10 | 11 | 12 | 13 |
| 14 | 15 | 16 | 17 | 18 | 12 | 13 | 14 | 15 | 16 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 19 | 20 | 21 | 22 | 23 | 23 | 24 | 25 | 26 | 27 |
| 28 | 29 | 30 | 1 | 2 | 26 | 27 | 28 | 29 | 30 | 30 | 1 | 2 | 3 | 4 |

| | | | | | | | | | |
|-------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------|-------------|-------------------------------------------------------------------------------------|---------------------|-------------------------------------------------------------------------------------|-------------------|---------------------------------------------------------------------------------------|--------------------|
|  | No Class |  | Quiz |  | Midterm Exam |  | Final Exam |  | Finals Week |
|-------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------|-------------|-------------------------------------------------------------------------------------|---------------------|-------------------------------------------------------------------------------------|-------------------|---------------------------------------------------------------------------------------|--------------------|

The Final Exam is scheduled for Tuesday, June 24th, from 1:45 to 3:45 PM.

Student Learning Outcome(s):

- Examine new, previously un-encountered problems by critically analyzing and evaluating their constituent parts, to construct and explain a logical solution utilizing, and based upon, the fundamental laws of mechanics.
- Acquire skill and 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:

| | | |
|---|--------------------|-----|
| M | 12:30 PM - 1:20 PM | S55 |
| W | 2:30 PM - 3:20 PM | S55 |