

PHYS 50: Preparatory Physics

FALL 2023

Professor	Class Time	Contact
Zuleyha Yuksek, PhD	M - Th : 9:30 am - 10:20 am Location: MLC 103, in-person	yuksezkuleyha@fhda.edu (408) 864-8668, S11a

Course website Canvas through your De Anza portal (<https://deanza.instructure.com/>)

Final Exam Tuesday, Dec 12 from 9:15 AM to 11:15 AM, MLC 103

NOTE: Last day to drop a class with a "W" is November 17. If you do not drop by this date, you will get a grade according to your performance in this class at the end of the quarter.

Description

The preparatory physics course provides an algebra-based introduction to the basic concepts of physics that form the foundation of all the natural sciences. It introduces classical mechanics, which is the application of the fundamental laws of Newtonian mechanics to a variety of simple systems. This course is an introduction to the physical laws that describe and explain the motion of bodies and will help you to develop problem-solving skills as preparation for Physics 4A.

The topics we will cover this quarter include: one dimensional and two dimensional kinematics; vectors, uniform circular motion; linear dynamics (i.e., Newton's Laws) and applications of Newton's Laws; work; and Energy.

Prerequisites

Advisory: MATH 43 (or MATH 43H) and PHYS 10.

Required / Recommended Materials

- The textbook for this course is *Physics* by James S. Walker, Vol 1, 4th Edition.
- The homework system for the course is expertTA. You will purchase access to expertTA when you open your first homework assignment.
 - The cost of expertTA is \$32.50 for the quarter (the price might change).
- You will need a calculator.

Teaching Philosophy

I will use a combination of mini-lectures and collaborative learning activities in pairs and groups (in-class discussion, problem solving, etc.) to help you learn the material. *My role will be to facilitate your learning through discussion and in-class activities, not to have you copy down everything I say or write. The flip-side is that you have to come to class prepared, ready to discuss the material, and to participate!*

Course Format

In-class - You will come to class by reading and completing reading quizzes for each chapter. There will be a mini-lecture to introduce the topic at the beginning of class. Throughout the class, you will answer Think/Pair/Share questions, then do problem-solving in pairs. You are highly encouraged to meet outside of class with your friends to work on homework assignments by Zoom or by Canvas-Group features (Conference).

Asynchronous Work - You are expected to complete reading, reading quizzes and homework assignments outside of class time.

You are expected to:

1. Pre-class assignment
 - complete reading assignments through your book.
 - complete a reading quiz on a reading assignment.
2. Complete HW assignments.

You are encouraged to work collaboratively with your friends on the homework assignments, but any submitted assignment must be your own.

Office Hours: - I will be offering office hours in person in my office, check the Canvas page for details.

Grading Policy

NO CURVE! Your final letter grade will be determined by dividing the total number of points earned (including extra credit) by the total number of possible points (excluding extra credit), multiplying by 100, and consulting the following table:

Letter Grade	Percent Points	Letter Grade	Percent Points	Letter Grade	Percent Points
A	93.0-100.0	A-	90.0-92.9	B+	87.0-89.9
B	83.0-86.9	B-	80.0-82.9	C+	77.0-79.9
C	73.0-76.9	C	70.0-72.9	D+	67.0-69.9
D	63.0-66.9	D-	60.0-62.9	F	0-59.9

Your grade will be based on four major components, discussed in detail below, with the following relative weights:

Component	Weight
Reading Assignments	15%
Homework	15%
Class Activities	5%
Chapter Quizzes	10%
2 Midterms	30%
Cumulative Final Exam	25%
Quizzes - BONUS	5%

- **Reading:** You will need to complete a reading assignment before we start each chapter. All the assignments will be linked from within Canvas.
- **Online Homework:** Homework assignments will be through ExpertTA approximately per week due every Sunday at 11:59pm; however, it might change with respect to the assignment. So, check the canvas for each homework deadline. The assignments will be linked from within Canvas. Instructions for using Expert TA are provided below. You are encouraged to work together on the homework assignments; however, each student must do her/his own work and be able to solve each problem independently. Homework assignments will be accepted after the due date, but the maximum grade will be reduced by 5% per day. For the assignments submitted one week after the deadline, you will get half credit of your maximum grade. ***The lowest grade of the homework will be dropped in your total.***
- **Exams:** Over the course of the semester, there will be two Midterms. They will be on expertTA in class. You need to bring your laptop with you on exam dates. Review materials and more details will be provided closer to the time of the exam. This category counts for 30% of the overall course grade. *The Midterm exams cannot be missed or made up.*
- **Chapter Quizzes:** There will be a chapter quiz once we are finished each chapter and it will be administered in class on ExpertTA. You need to bring your laptop with you on quiz dates. You will be responsible for all the material covered in lectures, assigned reading, and homework assignment regarding the chapter. Chapter quizzes *cannot be missed or made up.* If you are missing for any reason, you will get ZERO!
- **Final Exam:** The final exam will be a 2-hour, cumulative, closed-book/closed- notes exam. It will be on expertTA in class. You need to bring your laptop with you on the final exam date. The final exam cannot be missed or made up. This category counts for 25% of the overall course grade.
- **Extra Credit Opportunities:** Throughout the quarter, there will be different extra credit opportunities. They might be some of the class assignments, attendance, or more. **They are**

OPTIONAL. At the end of the quarter, %5 of this part will be added on your total as BONUS POINTS!!!!

- **Policy on Late Work** : Homework assignments will be accepted after the due date, but the maximum grade will be reduced by 5% per day. For the assignments submitted one week after the deadline, you will get half credit of your maximum grade. All other assignments must be completed on time - no late work will be accepted.

Registration Instructions for ExpertTA

From inside of Canvas, go to an available assignment that uses Expert TA and open it. Our first assignment is in **Module 0, HW 0.1 / Learning ExpertTA**. This action brings you directly to the take assignment page. This automatically registers you in Expert TA, so Canvas will be your primary springboard for accessing our system for the quarter.

Check-out:

- You will not be able to do homework until you complete the payment process.
- You will need to click on the check box to confirm that you are purchasing access for the class listed.

After you have clicked the checkbox, you will choose your method of payment. If you are using a credit card to pay now, click “Credit Card”. The option for a “free 14-day Trial” will allow you to delay your payment for exactly two weeks. If a trial is chosen, you will be able to do homework immediately, and be asked to make your actual payment with a credit card after the trial period has ended.

Payment with a Credit Card:

- After clicking “Credit Card” you will be redirected from our site to Authorize.net
- Authorize.net is an industry leader in secure payments and used by tens of thousands of companies.
- Enter your credit card information. Note: Pay careful attention when entering information into each field, including the street address and CVV code boxes.

Registration is Complete and you are done! You will be directed to your assignment to begin your work. *As you work problems, your scores are ported back over to Canvas within a few minutes at a time.*

Verify your email: You will see information at the top of the page each time you are redirected from Canvas into Expert TA, including the email address our system captured for you. This is your username and how we uniquely identify you in our system. If for some reason your email address in Canvas changes, this can cause issues. Be sure to verify your email from time to time to make sure it’s the same.

Do I need a password? No, because you log into Canvas, you will never access Expert TA directly from our login page, as your password is handled and managed via Canvas at all times.

Can I study from previously taken assignments? Yes, if you want to visit Expert TA for additional practice, or to study, then you can go into the system from an older assignment, and then navigate manually outside of the take assignment area to the Class Management page, which is your dashboard. All assignments used with Canvas are shown here. Completed sets can be opened back up by clicking the assignment name and choosing View Detailed Grade Report.

FAQs: Hints and Feedback are provided throughout the term while taking assignments, typically for homework and not on exams. Hints are generalized tips, whereas feedback is always meaningful assistance based on your most recent incorrect answer.

Student Support Link: <http://theexpertta.com/support/student-support>

24x7 Student Support: - email main@theexpertta.com or call 877-572-0734.

My Expectations

I expect you to come to each class prepared, ready to discuss the material, and to be active participants in all discussions and group-based activities. In particular:

- 1- Attendance is required— During class time, we will complete activities and practice problems that will reinforce the concepts that we are covering. Please don't come to class if you don't feel well but do let me know.
- 2- Be respectful—Please treat everybody as you would like to be treated. That includes respecting differences of opinion, listening attentively while others are speaking, and ensuring no discourteous interruptions or distractions (cell phones should be silenced, no texting, no browsing the web, etc.). Any disruptive behavior during class will not be tolerated. If there is disruptive behavior during the class, the student will be given a warning. If the problem persists, then the student is asked to leave the class and a disciplinary report may be in progress.
- 3- Time management —
 - a. Reading should take 2–4 hours per week. Be sure to read the text before class, take notes and work through examples, and complete the Online Reading Assignments!
 - b. Homework should take 3–5 hours per week. Be sure to start your homework early and get help if you need it from your instructors, other students, and the physics tutors.
 - c. Quiz Preparation should take 1 – 2 hours per week. If you are completing the assigned reading, applying yourself in class and lab, and completing your homework conscientiously, you won't need to put much time into preparing for the quiz.
 - d. Completing the quiz should take 1-2 hours to complete, depending on whether you use all the available attempts.

Additional Policies & Information

- 1- Academic Integrity: Each student will be held to a high standard of academic integrity. Cheating (copying) on the homework, exams, or any other assignments will result in a zero for the assignment and may also cause you to fail the class. Keep in mind: if you feel overwhelmed by the material and assignments, or simply need additional help, come to my office hours, attend tutoring, or get in touch with me as soon as possible.
- 2- Accommodations Policy: In compliance with the Americans with Disabilities Act and with Section 504 of the Rehabilitation Act, De Anza College is committed to ensuring educational access and accommodations for all its registered students. I request that any student with a documented disability needing academic adjustments or accommodations speak with me during

the first two weeks of class. All discussions will remain confidential. Students with disabilities should also contact the [De Anza College Disability Services Office](#).

- 3- **Inclusive Classroom:** In this community, diversity is an invitation to celebrate the uniqueness of each individual, as well as the cultural differences that enrich us all. In this course, I will do my best to ensure that students from all backgrounds and perspectives will be served equitably. The diversity that students bring to this class will be viewed as a resource, strength and benefit. It is my intent to present materials and activities that are respectful and inclusive of the many identities of students in terms of gender, sexual orientation, disability, age, socioeconomic status, ethnicity, race, culture, perspective, and other background characteristics. Your suggestions about how to improve the value of diversity and inclusiveness in this course are encouraged and appreciated.
- 4- **Reporting a Bias Incident or Sexual Misconduct:** In any case of possible bias or sexual misconduct, either in the classroom or anywhere on campus, you are encouraged to file a complaint. You should use the online form [here](#). Any De Anza community member, who experiences or observes an incident of bias or misconduct, including faculty, staff and students, can file a report through this system. More information and resources around procedures dealing with sexual misconduct and discrimination and harassment are available [here](#).
- 5- **Emergency preparedness:** In the event of a campus-wide emergency or College Closure (e.g., storm day) continue with readings and assignments according to the course schedule and as posted on Canvas. Online office hours will be established. Information regarding the status of the Colleges status and reopening schedule may be monitored on the De Anza College home page.

Course Schedule & List of Topics

Below is the *tentative* schedule of topics for the course. Please refer to the SCHEDULE on canvas or canvas itself for the most up-to-date schedule, reading and homework assignments, and other deadlines.

Chapter	Topic	Time (weeks)
Ch 1	Introduction to Physics	0.5
Ch 2	Kinematics in 1D	2
Ch 3	Vectors	1
Ch 4	Kinematics in 2D	2
Ch 5	Force & Motion	2
Ch 6	Circular Motion & Other Applications of Newton's Law	2
Ch 7	Energy of a System	1

Student Learning Outcome(s):

- Examine critically 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.

Office Hours:

T,TH 11:00 AM 01:00 PM In-Person In-person