



Department of Physics  
College of Natural Sciences  
and Mathematics

**COURSE TITLE/SECTION:** Physics 2325 University Physics I/Class Number #####

**TIME:** Time and Days

**LOCATION:** Classroom #

**FACULTY:** Instructor name

**OFFICE HOURS:** Times and location/connection info

**E-mail:** Instructor email

**Phone:** (713) 743- #####

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### Physics 2325 University Physics I

**Catalog Description:** First semester of a two-part calculus-based course covering mechanics of one- and two-dimensional motion, dynamics, energy, momentum, rotational dynamics and kinematics, statics, gravity, oscillations, waves and fluids.

Primarily for science and engineering majors. Credit may not be applied toward degree for both Phys 2325 and Phys 1301.

**Prerequisites:** Credit for or concurrent enrollment in Math 2414

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### Course Structure:

***Computer and internet access are required for this course.***

Canvas, Expert TA, Microsoft Teams and possibly other online resources will be required for this course. Students may also be required to send scans of paper documents (i.e. using a smart phone with camera or scanner).

**Use this link to register for our Expert TA course:** [Expert TA registration link here.](#)

You must use your CougarNet email (with extension @cougarnet.uh.edu) to register for Expert TA. See below for information about obtaining your Expert TA access code. If you do not yet have your Expert TA access code, you can still register with a free trial and add your access code later.

**Required Materials: Expert TA, OpenStax University Physics textbook.**

Undergraduate students enrolled in this course have been automatically opted into the Cougar Textbook Access Program (CTAP). CTAP provides undergraduate students access to all your required course materials before the first day of class, for one low, flat fee. You may choose to opt out of the CTAP fee through your student account; however, if you opt out, you will need to procure the course materials for all your classes on your own. Please visit the [CTAP website](#) for more detailed information or email [ctapuh@central.uh.edu](mailto:ctapuh@central.uh.edu).

If you did not opt out of CTAP, your Expert TA access code will be provided through CTAP. You will receive an email when your Expert TA access code can be picked up at the UH

Campus Store. The product may be listed as “Intro to physics homework (semester).” A link to the online textbook will be available on Canvas or can be accessed directly via <https://openstax.org/details/books/university-physics-volume-1>.

If you opted out of CTAP, Expert TA may be purchased through the UH Campus Store, or standalone access can be purchased directly from the website <https://theexpertta.com/>. The online textbook is freely available at the link above.

A printed copy of the textbook can be purchased if desired but is not required.

### Course Requirements:

- A. **(OPTIONAL) Warm up Assignments:** Reading quizzes covering the material from the reading assignment, consisting of 2-3 questions/problems, will be assigned online. The quizzes will be available at least 24 hours before they are due, and they will be due by the beginning of the lecture time. There will be a time limit for taking the quiz and you will be allowed 2 attempts for each quiz. Solutions for the quizzes will be discussed during the lecture and will be posted on the class website.
- B. **Homework Assignments:** Homework will be completed online using Expert TA. Ten or more homework problems will be assigned at the beginning of each chapter and will be due approximately one week from that date.
- C. **Diagnostic Exam:** The required diagnostic exam for this course will test your basic mathematical skills in algebra, geometry, trigonometry, calculus, and word problem solving. The exam consists of 20 multiple choice questions. The exam will be administered by the CASA Testing Center **August 19-29, 2024**. You can log onto the CASA website <https://ccs.casa.uh.edu/canvas2.html> with your Cougarnet credentials to schedule the test.  
The diagnostic exam is worth 3% of your final grade for the course. If you score above 70%, you should be well prepared to pass the course; 51 - 70%, you should review algebra, trigonometry and pre-calculus; 50% and below, it is recommended that you drop the course and re-enroll once you have improved your math and problem solving skills.
- D. **My Readiness Test Math Tutorial:** If you wish to improve your math skills, you can complete a math tutorial which has been set up by the Department of Physics. The math tutorial course is set up through My Readiness Test. You can purchase a code for My Readiness Test for \$15 during the registration process. See <https://uh.edu/nsm/physics/undergraduate/intro-course-info/> for information on how to register and access the math tutorial through My Readiness Test.
- E. **Exams:** There will be three regular exams. Regular exams will cover 3-5 chapters each. There will also be a longer final exam which will be comprehensive, covering all the material in the course. The regular exams will be administered by CASA. Regular exams will be offered for 2 days, which may include weekends. You must sign up for an exam time in advance. The final exam will be in your usual classroom, according to the schedule here: <https://uh.edu/academics/courses-enrollment/final-exam-schedules>.
- F. **Teamwork Component:** A teamwork component will be evaluated in this course.  
**Instructors: This is required component of the course. Choose one of these examples or use some other form of teamwork.**
  - a. Concept tests will be administered during lecture. Students will discuss these questions in teams as a method of peer instruction.
  - b. Teams consisting will be assigned to create a study guide for each of the exams for the course. The study guides will be posted in Blackboard and students will be able to choose the study guide which is best for use to prepare for the exam.

Each group will have to work together to determine what will be included on the study guide and the best format for presenting it to the students.

c. Other?

### Grading:

3% Diagnostic Exam

5% Teamwork

12% Discretionary – Could count for reading quizzes, more towards exams, etc. However, this percentage cannot be put towards Homework)

10% Homework

17% Regular Exam I

17% Regular Exam II

17% Regular Exam III

19% Final Exam

**CASA Exam Procedures:** See the [CASA Testing Center Guidelines](#).

**Makeup Exams:** Makeup exams will only be allowed for documented reasons listed under the [Undergraduate Excused Absence Policy](#). You must contact your instructor before the exam if possible or as soon as possible after missing the exam to make the request. Makeup exams at CASA will be held in the week following the regular exam. If your request for a makeup exam is approved, your instructor will contact you by email, typically on Monday of that week, to inform you what day you will be able to take the makeup and to give instructions for scheduling. If you expect to have an extended absence or to miss multiple exams, please contact your instructor to discuss other alternatives.

**Academic Honesty:** It is each student's responsibility to read and understand the Academic Honesty Policy found at <http://www.uh.edu/academic-honesty-undergraduate>.

The following rules apply to all exams for this class:

- Do not communicate about the exam with anyone (other than your instructor or CASA staff) from the time that the first student takes the exam until 48 hours after the last student takes the exam.
- Do not post information about the exam at any time (while you are taking it or afterward) on a website or any other forum where other people can find the information.
- Do not make or save a record of the exam questions. This includes screenshots, pictures, video, copying and pasting the text, etc.
- Do not use any electronic devices while taking the exam other than the computer you are using to take the exam and your calculator.
- While you are taking the exam, you may not have any other applications open on your computer.
- Do not consult any outside resources such as books, notes, or websites while taking the exam.
- Do not search for or view exam questions that have been posted to websites, including but not limited to Chegg or Course Hero. Viewing exam questions on these websites while the exam is ongoing will be considered an act of academic dishonesty.

Academic Honesty proceedings may be initiated against any student who violates these rules.

### **Course Objectives:**

The objective of this course is to learn the principles of mechanics through application of Newton's laws, understand the concept of energy and be able to apply these concepts to describe the motion of objects.

Upon completion of this course, students will be able to:

1. master the physical concepts of force and energy;
2. be able to apply these to obtain solutions to technical problems;
3. use this scientific foundation to continue studies in more advanced courses in science and engineering.

Other learning outcomes include:

1. Students completing this course will be able to convey knowledge of the principles of physics and be able to use these principles to solve problems.
2. Students will be able to take a real-life problem and use physical principles and mathematical tools to describe the problem.

### **Course Content:**

This course will cover Chapters 1-17 which include the following topical areas:

1. Vectors
2. Newtonian Mechanics: Motion in 1-D, 2-D and 3-D
3. Newton's Laws: Force and Motion
4. Work and Energy
5. Momentum and Collisions
6. Systems of Particles
7. Circular Motion
8. Rotational of Rigid Bodies
9. Gravitation
10. Solids and Fluids
11. Oscillations
12. Waves and Sound

**Tutoring and Additional Resources:** See <https://uh.edu/nsm/physics/undergraduate/intro-course-info/>.

**Policy on grades of I (Incomplete):** The temporary grade of I (incomplete) is a conditional and temporary grade given when students (a) are currently passing a course or (b) still have a reasonable chance of passing in the judgment of the instructor, but for non-academic reasons beyond their control have not completed a relatively small part of all requirements. Incompletes will be given only when documentation has been submitted to support the need to receive an incomplete, i.e., medical statements.

### Mental Health and Wellness Resources

The University of Houston has a number of resources to support students' mental health and overall wellness, including [CoogsCARE](#) and the [UH Go App](#). UH [Counseling and Psychological Services \(CAPS\)](#) offers 24/7 mental health support for all students, addressing various concerns like stress, college adjustment and sadness. CAPS provides individual and couples counseling, group therapy, workshops and connections to other support services on and off-campus. For

assistance visit [uh.edu/caps](http://uh.edu/caps), call 713-743-5454, or visit a [Let's Talk](#) location in-person or virtually. [Let's Talk](#) are daily, informal confidential consultations with CAPS therapists where no appointment or paperwork is needed.

The [Student Health Center](#) offers a Psychiatry Clinic for enrolled UH students. Call 713-743-5149 during clinic hours, Monday through Friday 8 a.m. - 4:30 p.m. to schedule an appointment.

The [A.D. Bruce Religion Center](#) offers spiritual support and a variety of programs centered on well-being.

### **Need Support Now?**

**If you or someone you know is struggling or in crisis, help is available. Call CAPS crisis support 24/7 at 713-743-5454, or the National Suicide and Crisis Lifeline: call or text [988](tel:988), or chat [988lifeline.org](http://988lifeline.org).**

### Academic Honesty Policy

High ethical standards are critical to the integrity of any institution, and bear directly on the ultimate value of conferred degrees. All UH community members are expected to contribute to an atmosphere of the highest possible ethical standards. Maintaining such an atmosphere requires that any instances of academic dishonesty be recognized and addressed.

The [UH Academic Honesty Policy](#) is designed to handle those instances with fairness to all parties involved: the students, the instructors, and the University itself. All students and faculty of the University of Houston are responsible for being familiar with this policy.

### Title IX/Sexual Misconduct

Per the UHS Sexual Misconduct Policy, your instructor is a “responsible employee” for reporting purposes under Title IX regulations and state law and must report incidents of sexual misconduct (sexual harassment, non-consensual sexual contact, sexual assault, sexual exploitation, sexual intimidation, intimate partner violence, or stalking) about which they become aware to the Title IX office. Please know there are places on campus where you can make a report in confidence. You can find more information about resources on the Title IX website at <https://uh.edu/equal-opportunity/title-ix-sexual-misconduct/resources/>.

### Reasonable Academic Adjustments/Auxiliary Aids

The University of Houston is committed to providing an academic environment and educational programs that are accessible for its students. Any student with a disability who is experiencing barriers to learning, assessment or participation is encouraged to contact the Justin Dart, Jr. Student Accessibility Center (Dart Center) to learn more about academic accommodations and support that may be available to them. Students seeking academic accommodations will need to register with the Dart Center as soon as possible to ensure timely implementation of approved accommodations. Please contact the Dart Center by visiting the website: <https://uh.edu/accessibility/> calling (713) 743-5400, or emailing [jdcenter@Central.UH.EDU](mailto:jdcenter@Central.UH.EDU).

### Excused Absence Policy

Regular class attendance, participation, and engagement in coursework are important contributors to student success. Absences may be excused as provided in the University of Houston [Undergraduate Excused Absence Policy](#) and [Graduate Excused Absence Policy](#) for reasons including: medical illness of student or close relative, death of a close family member, legal or government proceeding that a student is obligated to attend, recognized professional

and educational activities where the student is presenting, and University-sponsored activity or athletic competition. Under these policies, students with excused absences will be provided with an opportunity to make up any quiz, exam or other work that contributes to the course grade or a satisfactory alternative. Please read the full policy for details regarding reasons for excused absences, the approval process, and extended absences. Additional policies address absences related to [military service](#), [religious holy days, pregnancy and related conditions](#), and [disability](#).

#### Recording of Class

Students may not record all or part of class, livestream all or part of class, or make/distribute screen captures, without advanced written consent of the instructor. If you have or think you may have a disability such that you need to record class-related activities, please contact the [Justin Dart, Jr. Student Accessibility Center](#). If you have an accommodation to record class-related activities, those recordings may not be shared with any other student, whether in this course or not, or with any other person or on any other platform. Classes may be recorded by the instructor. Students may use instructor's recordings for their own studying and notetaking. Instructor's recordings are not authorized to be shared with anyone without the prior written approval of the instructor. Failure to comply with requirements regarding recordings will result in a disciplinary referral to the Dean of Students Office and may result in disciplinary action.