



Department of Physics
College of Natural Sciences
and Mathematics

COURSE TITLE/SECTION: Physics 2325 (previously 1321) 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-####

Physics 2325 (previously 1321) 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 (previously 1321) and Phys 1301.

Prerequisites: Credit for or concurrent enrollment in Math 2414 (previously 1432)

Course Structure:

Computer and internet access are required for this course.

Blackboard, 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).

Expert TA is required and may be purchased through the UH bookstore, or standalone access can be purchased directly from the website <https://theexpertta.com/>.

Expert TA information, Teams connection information, and other relevant information specific to your course [here](#).

Textbook:

University Physics, Volume 1, available for free here:

<https://openstax.org/details/books/university-physics-volume-1> (A printed copy can be purchased from the bookstore or directly from the website if desired.)

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 **Jan 17-27** You can log onto the CASA website <http://casa.uh.edu> to schedule the test. You must have a CASA account. If you don't already have one, go to <http://casa.uh.edu/>, click "I don't have an account," fill in the information and submit the form.
- 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.**
- Concept tests will be administered during lecture. Students will discuss these questions in teams as a method of peer instruction.
 - 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.
 - 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

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.

Counseling and Psychological Services (CAPS) can help students who are having difficulties managing stress, adjusting to college, or feeling sad and hopeless. You can reach CAPS (www.uh.edu/caps) by calling 713-743-5454 during and after business hours for routine appointments or if you or someone you know is in crisis. Also, there is no appointment necessary for the "Let's Talk" program, which is a drop-in consultation service at convenient locations and hours around campus. <https://uh.edu/caps/outreach/lets-talk/>.

COVID-19: If you are experiencing any COVID-19 symptoms that are not clearly related to a pre-existing medical condition, do not come to class. Please see [Student Protocols](#) for what to do if you experience symptoms and [Potential Exposure to Coronavirus](#) for what to do if you have potentially been exposed to COVID-19. Consult the (select: [Undergraduate Excused Absence Policy](#) or [Graduate Excused Absence Policy](#)) for information regarding excused absences due to medical reasons.

COVID-19 Information

Students are encouraged to visit the University's [COVID-19](#) website for important information including diagnosis and symptom protocols, on-campus testing, and vaccine information. Please check the website throughout the semester for updates.

Vaccinations

Data suggests that vaccination remains the best intervention for reliable protection against COVID-19. Students are asked to familiarize themselves with pertinent [vaccine information](#) and to consult with their health care provider. The University strongly encourages all students, faculty and staff to be vaccinated.

Reasonable Academic Adjustments/Auxiliary Aids

The University of Houston complies with Section 504 of the Rehabilitation Act of 1973 and the

Americans with Disabilities Act of 1990, pertaining to the provision of reasonable academic adjustments/auxiliary aids for disabled students. In accordance with Section 504 and ADA guidelines, UH strives to provide reasonable academic adjustments/auxiliary aids to students who request and require them. If you believe that you have a disability requiring an academic adjustments/auxiliary aid, please contact [the Justin Dart Jr. Student Accessibility Center](#) (formerly the Justin Dart, Jr. Center for Students with DisABILITIES).

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.

Syllabus Changes

Due to the changing nature of the COVID-19 pandemic, please note that the instructor may need to make modifications to the course syllabus and may do so at any time. Notice of such changes will be announced as quickly as possible through (*specify how students will be notified of changes*).

Resources for Online Learning

The University of Houston is committed to student success, and provides information to optimize the online learning experience through our [Power-On](#) website. Please visit this website for a comprehensive set of resources, tools, and tips including: obtaining access to the internet, AccessUH, and Blackboard; requesting a laptop through the Laptop Loaner Program; using your smartphone as a webcam; and downloading Microsoft Office 365 at no cost. For questions or assistance contact UHOnline@uh.edu.