The University of Texas at Tyler
Syllabus
Spring 2026
University Physics I
Physics 2325

Instructor: Dr. Randy Back
Classroom: Soules College of Business 00111
Class Time: MWF 8-8:55
Office: RBN 4047
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Office Hours: MTWRF 9-10 or by appointment. Please contact me anytime you have questions.
Course Topics: This course will introduce the student to some basic concepts and principles in physics. Problem solving will be a major component of this class. Major topics covered will include Kinematics, Newton's Laws, Energy, Momentum, Rotational motion and Gravity.
Text: The textbook for this course is Physics for Scientists and Engineers: A Strategic Approach with Modern Physics, 5th edition by Knight and you need Modified Mastering Physics access for the homework. I recommend you buy the access code for Modified Mastering Physics and that will come with an eText of the book. Below is a link to the Pearson website where you can purchase access to the homework site and it comes with an eText of the book. 89.99 is the cheapest option that gives you access to the homework site and an electronic copy of the book.
https://www.pearson.com/en-us/subject-catalog/p/physics-for-scientists-and-engineers-a-strategic-approach-with-modern-physics/P200000006998/9780137319541
Modified Mastering Physics with Pearson eText -- ISBN-13: 9780137319541
Prerequisite: Math 2413 is required.
Homework (HW): Homework will be done on https://mlm.pearson.com/northamerica/masteringphysics/
The course ID is back48732. Homework is one of the most important parts of this class. You must spend significant time on the homework to really understand this material.
Quizzes: There will be weekly quizzes in class, usually on Friday.
Tests: There will be four tests given during the semester: Test 1 – February 4, Test 2 – February 27, Test 3 – April 1, Test 4 – April 24. The tests will be given in class. No calculators are allowed on the tests.
Final Exam: The Final exam will be in class on April 29 and cumulative for the entire semester. No calculators allowed on the final. The final can replace your lowest test score.
Make-up: **No late work will be accepted**. If you have an excused absence you must make up the work before the due date.
Grading: The components of your final grade are given below

4 Tests - 65 %
HW- 10 %
Quizzes- 10 %
Final – 15 %

Your final letter grade will be given based on the following percentages: A (90%-100%), B (80%-89%), C (70%-79%), D (60%-69%),F (<60%).
Disability Statement: "If you have a disability, including a learning disability, for which you request disability support services/accommodation(s), please contact Ida MacDonald in the Disability Support Services office so that the appropriate arrangements may be made. In accordance with federal law, a student requesting disability support services/accommodation(s) must provide appropriate documentation of his/her disability to the Disability Support Services counselor. In order to assure approved services, the first week of class, diagnostic, prognostic, and prescriptive information should be received 30 days prior to the beginning of the semester services are requested. For more information, call or visit the Student Services Center located in the University Center, Room 282. The telephone number is 566-7079 (TDD 565-5579)." Additional information may also be obtained at the following UT Tyler Web address: http://www.uttyler.edu/disabilityservices.

Social Security Statement: It is the policy of The University of Texas at Tyler to protect the confidential nature of social security numbers. The University has changed its computer programming so that all students have an identification number.
Note Regarding Student Absence due to Religious Observance: Students who anticipate being absent from class due to a religious observance are requested to inform the instructor by the second class meeting of such absences.

Grade Replacement

If you are repeating this course for a grade replacement, you must file an intent to receive grade forgiveness with the registrar by the Census date. Failure to file an intent to use grade forgiveness will result in both the original and repeated grade being used to calculate your overall grade point average. A student will receive grade forgiveness (grade replacement) for only three (undergraduate student) or two (graduate student) course repeats during his/her career at UT Tyler. (2006-08 Catalog, p.35)

Student Academic Conduct
In this course students are encouraged to work in groups when doing homework and preparing for quizzes and tests. However, during quizzes and examinations a code of honor will apply under which students are to work alone and neither give help to others nor receive help from any sources. Cheating will not be tolerated.

Concealed Campus Carry
We respect the right and privacy of students who are duly licensed to carry concealed weapons in this class. License holders are expected to behave responsibly and keep a handgun secure and concealed. More information is available at http://www.uttyler.edu/about/campus-carry/index.php.

A more complete description of University policies is listed at the following website:
http://www.uttyler.edu/academicaffairs/syllabuspolicies.pdf
The Census day is January 26
Last Day to withdraw from a course is March 30

Course Objectives/Student Learning Outcomes
1. Critical Thinking Skills (includes creative thinking, innovation, inquiry and analysis, evaluation and synthesis of information)
The student will demonstrate their critical thinking skills by using mathematical models and physical concepts to analyze physical systems. This Student Learning Outcome (SLO) will be assessed using test questions.
2. Communication Skills (includes effective development, interpretation and expression of ideas through written, oral and visual communication
The student will communicate an understanding of the physics principles discussed in class on free response test questions. The questions will require the student to express a qualitative understanding through written communication of the physics concepts covered in class. This SLO will be assessed using test questions.

Departmental statement on cell phones and electronic devices.
Cell phones, smart watches, and any similar electronic devices must be turned off and put away during exams. If they observed out in a visually accessible place (*i.e.* between legs, on the floor, *etc.*), it will be assumed that they are being used to cheat; your exam will be taken away, you will receive a zero score (0 points) for the test, and you will be referred to the Office of Judicial Affairs.

General Course Information
1. You are responsible for all the material covered in class.
2. Physics builds on itself. It is very important that you do not fall behind on the material.
3. You should read the book multiple times. If you do not understand the material in the book you will not understand the material on the tests.
4. It is very important that you spend time reading the material and doing the homework. The only way you will understand the material is to spend time working the problems.
5. I strongly encourage you to ask questions any time you need help with physics.

Spring 2026
PHYS 2325 Schedule

Monday January 12- Introduction and Chapter 1 (Motion Diagrams)
Wednesday January 14- Chapter 2 (position, displacement, velocity and acceleration)
Friday January 16-Chapter 2 (Graphs)
Monday January 19- Martin Luthor King Jr. Holiday
Wednesday January 21 Chapter 2 (Kinematic Equations)
Friday January 23- Chapter 2 & Chapter 3 (Kinematic Equations and vectors)
Monday January 26- Chapter 3 & Chapter 4 (Vectors and motion in two dimensions)
Wednesday January 28- Chapter 4 (Projectile motion)
Friday January 30 - Chapter 4 (Projectile motion)
Monday February 2- Chapter 4 (Centripetal acceleration)
Wednesday February 4- Test 1
Friday February 6 - Chapter 5 (Catalog of Forces)
Monday February 9- Chapter 5 & Chapter 6 (Newton's first and second laws and friction)
Wednesday February 11- Chapter 6 Friction
Friday February 13- Chapter 7 (Newton's third law)
Monday February 16- Chapter 7 (Newton's third law)
Wednesday February 18- Chapter 7 (Newton's third law)
Friday February 20- Chapter 8 (Centripetal Force)
Monday February 23- Chapter 8 (Circular Motion)
Wednesday February 25- Chapter 8 (Centripetal force and Circular motion)
Friday February 27-Test 2
Monday March 2- Chapter 9 (Work)
Wednesday March 4- Chapter 9 (Work and kinetic energy)
Friday March 6- Chapter 10 (Potential energy)
Monday March 9- Spring Break
Wednesday March 11- Spring Break
Friday March 13- Spring Break
Monday March 16- Chapter 10 (Conservation of energy)
Wednesday March 18- Chapter 10 (Conservative and non-conservative forces)
Friday March 20- Chapter 11 (impulse)
Monday March 23- Chapter 11 (Impulse and conservation of momentum)
Wednesday March 25- Chapter 11 Conservation of momentum
Friday March 27- Chapter 11 (Conservation of momentum- 2D)
Monday March 30-Chapter 11 (Conservation of momentum and energy)
Wednesday April 1- Test 3
Friday April 3- Chapter 12 (Rotational kinematics)
Monday April 6- Chapter 12 (Rotational energy and moment of inertia)
Wednesday April 8– Chapter 12 (Torque, static equilibrium)
Friday April 10- Chapter 13 (Angular Momentum)
Monday April 13- Chapter 13 (Newton's Law of Gravity)
Wednesday April 15- Chapter 13 (conservation of energy)
Friday April 17- Chapter 13(Kepler's Laws)
Monday April 20- Chapter 13 (Satellite Orbits)
Wednesday April 22-Chapter 13 (Satellite Orbits)
Friday April 24- Test 4
Monday April 28
Wednesday April 29 Final Exam