

The University of Texas at Tyler
Syllabus
Summer 2023
College Physics I
Physics 1301
Section 1

Instructor: Dr. Randy Back

Classroom: RBN 4034

Class Time: M-F 9-10:40

Office: RBN 4047

Phone: (903) 565-5797

Email: rback@uttyler.edu

Office Hours: Monday, Tuesday, and Thursday 10:40-11:40 or by appointment. You should feel free to stop by my office any time. If I am available, I will be happy to help you.

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:

College Physics - Modified Access

By Knight, Randall D. / Jones, Brian / Field, Stuart

Edition: 4TH 19

Publisher: PEARSON

ISBN 13: 9780134724744

Prerequisite: MATH 1316 or MATH 2312.

Homework: Homework will be done on <https://mlm.pearson.com/northamerica/masteringphysics/>. The course ID is back48783. Homework is one of the most important parts of this class. You must spend significant time on the homework to really understand this material.

Tests: There will be four tests given during the semester: Test 1 – June 6, Test 2 – June 14, Test 3 – June 22, Test 4 – June 30. Calculators will not be allowed during the tests, unless stated otherwise.

Final Exam: There will be no final exam.

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 - 80 %

HW- 20%

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 June 5th

Last Day to withdraw from a course is June 21st

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 outside class 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 in class and come by my office any time you need help with physics.
6. Regular classroom attendance is expected.

Online Physics Resources

1. <http://lightandmatter.com/>
2. <http://hyperphysics.phy-astr.gsu.edu/hbase/hframe.html>
3. <http://www.physicsclassroom.com/>
4. <http://ocw.mit.edu/courses/physics/8-01t-physics-i-fall-2004/lecture-notes/>
5. <http://ocw.mit.edu/courses/physics/>
6. <http://www.splung.com/>

Summer 2023

PHYS 1301

Schedule

Tuesday May 30- Introduction & Chapter 1- Motion diagrams and graphs

Wednesday May 31- Chapter 2- kinematics, Graphs, and equations

Thursday June 1- Chapter 2- kinematics and equations

Friday June 2- Chapter 3- Vectors, Projectile motion, and circular motion

Monday June 5- Chapter 3-Vectors, Projectile motion, and circular motion

Tuesday June 6- **Test 1**

Wednesday June 7- Chapter 4 Forces- and Newton's Laws

Thursday June 8- Chapter 5 -Newton's Laws

Friday June 9- Chapter 5- Newton's Laws

Monday June 12- Chapter 6- Circular Motion

Tuesday June 13- Chapter 6- Newton's Law of Gravity

Wednesday June 14- **Test 2**

Thursday June 15- Chapter 7- Rotational kinematics

Friday June 16- Chapter 7- Rotational dynamics

Monday June 19- Chapter 7- Rotational dynamics

Tuesday June 20- Chapter 8- Static equilibrium

Wednesday June 21- Chapter 8- Hooke's Law

Thursday June 22- **Test 3**

Friday June 23- Chapter 9- Impulse and momentum

Monday June 26- Chapter 9 – conservation of momentum

Tuesday June 27- Chapter 10- Work and kinetic energy

Wednesday June 28- Chapter 10 – potential energy and conservation of energy

Thursday June 29- Chapter 10- Energy and momentum

Friday June 30- **Test 4**