

NORTH CENTRAL TEXAS COLLEGE

COURSE SYLLABUS

COURSE AND INSTRUCTOR INFORMATION

Course title: University Physics I.

Course prefix, number, and section number: PHYS2425-402.

Semester/Year of course: Fall 2022.

Semester start and end dates: August 22, December 10.

Modality (Face to face/Synchronous or Asynchronous online/Hybrid): Face to face.

Class meeting location, days, and times: Tuesdays and Thursdays (3:30 pm-4:50 pm), room 211.

Lab meeting location, days, and times: Thursdays (5:00 pm-7:30 pm), room 213.

Semester credit hours: 48.

Course description: 32.

Course prerequisites: MATH 2413 - Calculus I

Required course materials:

Recommended textbook: "Physics for Scientists and Engineers with Modern Physics" by Douglas C. Giancoli, 4th edition, Pearson.

ISBN-13: 978-0131495081

ISBN-10: 0131495089

Calculator (TI30XIIS or equivalent).

Name of instructor: Franz Aguirre.

Office location: room 261.

Telephone number:

E-mail address: faguirre@nctc.edu

Office hours for students: FLM02-221, Thursdays 1:30pm-3:30pm

SYLLABUS CHANGE DISCLAIMER

The faculty member reserves the right to make changes to this published syllabus if it is in the best interest of the educational development of this class. Any such changes will be announced as soon as possible in person and/or writing.

SUMMARY OF COURSE ASSIGNMENTS

List of graded assignments:

1. Quizzes (8): 5%
2. Partial Test (2): 25%
3. Labs (12): 15%
4. Homework and Reviews: 40%
5. Final Exam: 15%

Final grade scale: A: 90-100 B: 80-89 C: 70-79 D: 60-69 F: 0-59

Late work policy: no late solution to any assignment will be accepted.

SEE CANVAS FOR THE COMPLETE COURSE CALENDAR, OUTLINE, DETAILED DESCRIPTION OF GRADED WORK, AND OTHER RELATED MATERIAL.

COURSE POLICIES

Academic Integrity Policy:

Students are expected to submit their own solutions to assignments. A grade of zero will be assigned to the student who submits a copy of another student's work.

Attendance Policy: There is no grade for attendance but students are expected to attend all lectures and labs. There are no make-up labs.

Withdrawal Policy

A student may withdraw from a course on or after the official date of record. It is the student's responsibility to initiate and complete a Withdrawal Request Form.

The last day to withdraw from the course with a "W" is: October 31th

Student Learning Outcomes:

At the successful completion of this course the student will be able to:

1. Determine the components of linear motion (displacement, velocity, and acceleration), and especially motion under conditions of constant acceleration.
2. Solve problems involving forces and work.
3. Apply Newton's laws to physical problems.
4. Identify the different types of energy.

5. Solve problems using principles of conservation of energy.
6. Define the principles of impulse, momentum, and collisions.
7. Use principles of impulse and momentum to solve problems.
8. Determine the location of the center of mass and center of rotation for rigid bodies in motion.
9. Discuss rotational kinematics and dynamics and the relationship between linear and rotational motion.
10. Solve problems involving rotational and linear motion.
11. Define equilibrium, including the different types of equilibrium.
12. Discuss simple harmonic motion and its application to real-world problems.
13. Solve problems involving the First and Second Laws of Thermodynamics.

Core Objectives:

Critical Thinking
Communication
Teamwork
Empirical and Quantitative Analysis

COLLEGE POLICIES

STUDENT HANDBOOK

Students are expected to follow all rules and regulations found in the Student Handbook.

ADA STATEMENT

NCTC will adhere to all applicable federal, state and local laws, regulations and guidelines with respect to providing reasonable accommodations to afford equal educational opportunity. It is the student's responsibility to contact the Office for Students with Disabilities to arrange appropriate accommodations. See the OSD Syllabus Addendum.

STUDENT SERVICES

NCTC provides a multitude of services and resources to support students. See the Student Services Syllabus Addendum for a listing of those departments and links to their sites.

QUESTIONS, CONCERNS, or COMPLAINTS

The student should contact the instructor to deal with any questions, concerns, or complaints specific to the class. If the student and faculty are not able to resolve the issue, the student

may contact the chair or coordinator of the division. If the student remains unsatisfied, the student may proceed to contact the instructional dean.

Name of Chair/Coordinator: Jaime Noles

Office location: Gainesville 408

Telephone number: 940-668-7731 ext. 4930

E-mail address: jnoles@nctc.edu

Name of Instructional Dean: Mary Martinson

Office location: Gainesville 1403

Telephone number: 940.668.7731 ext. 4377

E-mail address: mmartinson@nctc.edu