General Physics I 1401.42D HY

Course Syllabus: Fall 2018

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"Northeast Texas Community College exists to provide responsible, exemplary learning opportunities."

Office Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Online
	7:15 – 8:15 3:50 – 4:15	7:15 – 8:15 3:50 – 4:15	7:15 – 8:15 3:50 – 4:15	7:15 – 8:15 3:50 – 4:15	7:15 – 8:15 3:50 – 4:15	

The information contained in this syllabus is subject to change without notice. Students are expected to be aware of any additional course policies presented by the instructor during the course.

Course Description: Four credit hours. This course is for pre-dental, biology, pre-medical, pre-pharmacy, and pre-architecture majors and other students who need a two-semester technical course in physics. The course includes mechanics, fluids, heat, and waves.

Required Textbook(s):
This course will utilize the textbook Serway and Vuille, *College Physics*, Tenth Edition, Cengage Learning, Stamford, CT, 2015.

Publisher: Cengage Learning

ISBN Number: 978-1-285-76249-4

Calculator: You will need a scientific calculator or graphing calculator for this class.

Student Learning Outcomes:

Upon successful completion of the lecture portion of this course, students will

1401.1 Determine the components of linear motion (displacement, velocity, and acceleration) and especially motion under conditions of constant acceleration.

1401.2 Apply Newton's Laws to physical problems including gravity.

1401.3 Solve problems using principles of energy.

1401.4 Use principles of impulse and linear momentum to solve problems.

1401.5 Solve problems in rotational kinematics and dynamics, including the determination of the location of the center of mass and center of rotation for rigid bodies in motion.

1401.6 Describe the components of a wave and relate those components to mechanical vibrations, sound, and decibel level.

1401.7 Demonstrate an understanding of equilibrium, including the different types of equilibrium.

1401.8 Discuss simple harmonic motion and its application to quantitative problems or qualitative questions.

1401.9 Solve problems using the principles of heat and thermodynamics.

Upon successful completion of the laboratory portion of this course, students will:

1001.1 Demonstrate techniques to set up and perform experiments, collect data from those experiments, and formulate conclusions from an experiment.

1001.2 Record experimental work completely and accurately in laboratory notebooks, and communicate experimental results clearly in written reports.

1001.3 Discuss experimental observations and how they relate to qualitative questions and quantitative problems.

Core Curriculum Purpose and Objectives:

Through the core curriculum, students will gain a foundation of knowledge of human cultures and the physical and natural world; develop principles of personal and social responsibility for living in a diverse world; and advance intellectual and practical skills that are essential for all learning.

Courses in the foundation area of mathematics focus on quantitative literacy in logic, patterns, and relationships. In addition, these courses involve the understanding of key mathematical concepts and the application of appropriate quantitative tools to everyday experience.

College Student Learning Outcomes:

Critical Thinking Skills

CT.1 Students will demonstrate the ability to 1) analyze complex issues, 2) synthesize information, and 3) evaluate the logic, validity, and relevance of data.

Communication Skills

CS.1 Students will effectively develop, interpret and express ideas through written communication.

Empirical and Quantitative Skills

EQS.1 Students will manipulate numerical data or observable facts by organizing and converting relevant information into mathematical or empirical form

EQS.2 Students will analyze numerical data or observable facts by processing information with correct calculations, explicit notations, and appropriate technology.

Teamwork

TW.2 Students will consider different viewpoints as a member of a team and work with others to support and accomplish a shared goal.

Course Outline:

Chapter 1: Introduction and Mathematical Concepts
Chapter 2: Kinematics in One Dimension
Chapter 3: Kinematics in Two Dimensions
Exam 1
Chapter 4: Forces and Newton's Laws of Motion
Exam 2
Chapter 7: Rotational Motion and the Law of Gravity
Chapter 5: Energy / Chapter 13: Vibrations and Waves (SHM)
Chapter 6: Momentum and Collisions
Exam 3
Chapter 9: Solids and Fluids

Chapter 10: Thermal Physics
Chapter 11: Energy in Thermal Processes
Chapter 12: The Laws of Thermodynamics
Exam 4
Chapter 13: Vibrations and Waves
Chapter 14: Sound
Final Exam

Evaluation/Grading Policy:
Homework and laboratory work will represent 25% of your grade. There will be 4 Unit Tests and a comprehensive Final Exam. The average of the tests will represent 75% of your grade. The letter grading system is: A (90_100%), B (80-89%), C (70-79%), D (60-69%), F (0-59%).

NTCC Academic Honesty Statement:
"Students are expected to complete course work in an honest manner, using their intellects and resources designated as allowable by the course instructor. Students are responsible for addressing questions about allowable resources with the course instructor. NTCC upholds the highest standards of academic integrity. This course will follow the NTCC Academic Honesty policy stated in the Student Handbook."

Academic Ethics
The college expects all students to engage in academic pursuits in a manner that is beyond reproach. Students are expected to maintain complete honesty and integrity in their academic pursuit. Academic dishonesty such as cheating, plagiarism, and collusion is unacceptable and may result in disciplinary action. Refer to the student handbook for more information on this subject.

ADA Statement:
It is the policy of NTCC to provide reasonable accommodations for qualified individuals who are students with disabilities. This College will adhere to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations as required to afford equal educational opportunity. It is the student's responsibility to request accommodations. An appointment can be made with Shannin Garrett, Academic Advisor/Coordinator of Special Populations located in the College Connection. She can be reached at 903-434-8218. For more information and to obtain a copy of the Request for Accommodations, please refer to the NTCC website - Special Populations.

Family Educational Rights And Privacy Act (Ferpa):
The Family Educational Rights and Privacy Act (FERPA) is a federal law that protects the privacy of student education records. The law applies to all schools that receive funds under an applicable program of the U.S. Department of Education. FERPA gives parents certain rights with respect to their children's educational records. These rights transfer to the student when he or she attends a school beyond the high school level. Students to whom the rights have transferred are considered "eligible students." In essence, a parent has no legal right to obtain information concerning the child's college records without the written consent of the student. In compliance with FERPA, information classified as "directory information" may be released to the general public without the written consent of the student unless the student makes a request in writing. Directory information is defined as: the student's name, permanent address and/or local address, telephone listing, dates of attendance, most recent previous education institution attended, other information including major, field of study, degrees, awards received, and participation in officially recognized activities/sports.

6 Drop Rule:
"Students who enrolled in Texas public institutions of higher education as first-time college students during the Fall 2007 term or later are subject to section 51.907 of the Texas Education Code, which states that an institution of higher education may not permit a student to drop (withdraw with a grade of "W") from more than six courses. This six-course limit includes courses that a transfer student has previously dropped at other Texas public institutions of higher education if they fall under the law. Students should be sure they fully understand this drop limit before they drop a course. Please visit the admissions office or counseling/advising center for additional information and assistance."

Other Course Policies:
The college's official means of communication is via your campus email address. I will use your campus email address and Blackboard to communicate with you outside of class. Make sure you keep your campus email cleaned out and below the limit so you can receive important messages.