

PHYSICS 2325020

FUNDAMENTALS OF PHYSICS I



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Office Hours: By email appointment

Course Information

Course Description

A comprehensive course with emphasis placed on the capacity to utilize the fundamental concepts of mechanics and thermodynamics in the solution of problems.

Prerequisite and Co-requisite Courses

Concurrent enrollment in, or credit for, Physics 2125 and Mathematics 2413 is required.

Prerequisite Skills

Ability to use Blackboard, to use a scientific calculator, and proficiency in college algebra and trigonometry are expectations of this course.

Student Learning Outcomes

Upon completion of this course, students will be able to:

- gain factual knowledge in physics,
- learn fundamental principles of physics, and
- apply course material to problem solving.

Course Delivery

This course is a face-to-face course with learning resources and supplemental materials posted in Blackboard.

Required Texts and Materials

Any calculus-based physics text will work for this course. Open source calculus-based physics textbooks are available in the Course Materials folder of Blackboard. If you prefer a hard copy of a text, then check online for old editions of Halliday, Serway, etc... A student of this institution is not under any obligation to purchase a textbook from a university-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.

Technology Requirements

To successfully complete this course, students need to use a scientific calculator, Blackboard, and complete the IDEA student ranking of instruction.

Communication

Faculty will respond to email and/or telephone messages within 24 hours during working hours Monday through Friday. Weekend messages may not be returned until Monday.

Written communication via email: All private communication will be done exclusively through your ASU email address. Check frequently for announcements and policy changes. In your emails to faculty, include the course name and section number in your subject line.

Virtual communication: Office hours and/or advising may be done with the assistance of the telephone, Collaborate, Skype, etc.

Grading

Evaluation and Grades

Course grades will be determined as indicated in the table below.

Assessment	Percent of Total Grade
Homework Assignments	35
Exams	45
Physics Concept Inventory	20
Total	100%

Grading System

Course grades will be dependent upon completing course requirements and meeting the student learning outcomes.

The following grading scale is in use for this course:

- A = 90.00-100 points
- B = 80.00-89.99 points
- C = 70.00-79.99 points
- D = 60.00-69.99 points
- F = 0-59.99 points (Grades are not rounded up)

Assignment and Activity Descriptions

The Physics Concept Inventory will be used to assess this course for institutional requirements. Assignments are completed in Blackboard. Late assignments will receive zero credit. The laboratory grade is separate from the lecture grade.

General Policies Related to This Course

All students are required to follow the policies and procedures presented in these documents:

- [Angelo State University Student Handbook](#)¹
- [Angelo State University Catalog](#)²

Academic Integrity

Students are expected to maintain complete honesty and integrity in all work. Any student found guilty of any form of dishonesty in academic work is subject of disciplinary action and possible expulsion from ASU.

The College of Science and Engineering adheres to the university's [Statement of Academic Integrity](#).³

Accommodations for Students with Disabilities

ASU is committed to the principle that no qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs or activities of the university, or be subjected to discrimination by the university, as provided by the Americans with Disabilities Act of 1990 (ADA), the Americans with Disabilities Act Amendments of 2008 (ADAAA) and subsequent legislation.

Student Disability Services is located in the Office of Student Affairs, and is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability. It is the student's responsibility to initiate such a request by contacting an employee of the Office of Student Affairs, in the Houston Harte University Center, Room 112, or contacting the department via email at ADA@angelo.edu. For more information about the application process and requirements, visit the [Student Disability Services website](#).⁴ The employee charged with the responsibility of reviewing and authorizing accommodation requests is:

Dallas Swafford
Director of Student Disability Services
Office of Student Affairs
325-942-2047
dallas.swafford@angelo.edu
Houston Harte University Center, Room 112

Incomplete Grade Policy

It is policy that incomplete grades be reserved for student illness or personal misfortune. Please contact faculty if you have serious illness or a personal misfortune that would keep you from completing course work. Documentation may be required. See ASU Operating Policy 10.11 [Grading Procedures](#)⁵ for more information.

Plagiarism

Plagiarism is a serious topic covered in ASU's [Academic Integrity policy](#)⁶ in the Student Handbook. Plagiarism is the action or practice of taking someone else's work, idea, etc., and passing it off as one's own. Plagiarism is literary theft.

In your discussions and/or your papers, it is unacceptable to copy word-for-word without quotation marks and the source of the quotation. It is expected that you will summarize or paraphrase ideas giving appropriate credit to the source both in the body of your paper and the reference list.

Papers are subject to be evaluated for originality. Resources to help you understand this policy better are available at the [ASU Writing Center](#).⁷

Student Absence for Observance of Religious Holy Days

A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. See ASU Operating Policy 10.19 Student Absence for [Observance of Religious Holy Day](#)⁸ for more information.

Title IX at Angelo State University

The University prohibits discrimination based on sex, which includes pregnancy, sexual orientation, gender identity, and other types of Sexual Misconduct. Sexual Misconduct is a broad term encompassing all forms of gender-based harassment or discrimination including: sexual assault, sex-based discrimination, sexual exploitation, sexual harassment, public indecency, interpersonal violence (domestic violence and/or dating violence), and stalking. As a faculty member, I am a Responsible Employee meaning that I am obligated by law and ASU policy to report any allegations I am notified of to the Office of Title IX Compliance.

Students are encouraged to report any incidents of sexual misconduct directly to ASU's Office of Title IX Compliance and the Director of Title IX Compliance/Title IX Coordinator at:

Michelle Miller, J.D.
Special Assistant to the President and Title IX Coordinator
Mayer Administration Building, Room 210
325-486-6357
michelle.boone@angelo.edu

You may also [file a report online](#)⁹ 24/7.

If you are wishing to speak to someone about an incident in confidence you may contact the University Health Clinic and Counseling Center at 325-942-2173 or the ASU Crisis Helpline at 325-486-6345.

For more information, visit the [Title IX website](#).¹⁰

Modifications to the Syllabus

This syllabus, including grade evaluation and course schedule, is subject to modification.

Course Schedule

Lesson	Dates	Assignments
Introduction	Jan 18	Due Jan 19 by 11:59 PM* <ul style="list-style-type: none"> Complete and Submit: <i>Introduction Assignment</i>
One-Dimensional Motion	Jan 20-25	Due Jan 26 <ul style="list-style-type: none"> Complete and Submit: <i>One-Dimensional Motion Assignment</i>
Energy	Jan 27	Due Jan 31 <ul style="list-style-type: none"> Complete and Submit: <i>Energy Assignment</i>
Potential Energy and Force	Feb 1	
<i>University Closed</i>	Feb 3	
Potential Energy and Force	Feb 8	Due Feb 9 <ul style="list-style-type: none"> Complete and Submit: <i>Potential Energy and Force Assignment</i>
Exam #1	Feb 10	
Work and Energy Dissipation	Feb 15-17	Due Feb 21 <ul style="list-style-type: none"> Complete and Submit: <i>Work, Power, and Dissipation Assignment</i>
Impulse and Momentum	Feb 22-24	
<i>University Closed</i>	Feb 24	
Conservation of Momentum	Mar 1	Due Mar 2 <ul style="list-style-type: none"> Complete and Submit: <i>Impulse and Momentum Assignment</i>
Vectors	Mar 3-8	Due Mar 7 <ul style="list-style-type: none"> Complete and Submit: <i>Vectors Assignment</i>
Two-Dimensional Motion	Mar 10-24	Due Mar 23 <ul style="list-style-type: none"> Complete and Submit: <i>Two-Dimensional Motion Assignment</i>
<i>Spring Break</i>	<i>Mar 15-17</i>	
Exam #2	Mar 29	
Circular Motion	Mar 31-Apr 7	Due Apr 11 <ul style="list-style-type: none"> Complete and Submit: <i>Circular Motion Assignment</i>
Harmonic Motion	Apr 12	Due Apr 18 <ul style="list-style-type: none"> Complete and Submit: <i>Harmonic Motion Assignment</i>
Waves and Sound	Apr 14-21	Due Apr 25 <ul style="list-style-type: none"> Complete and Submit: <i>Waves and Sound Assignment</i>
Exam #3	Apr 26	
Thermodynamics	Apr 2-May 3	Due May 5 <ul style="list-style-type: none"> Complete and Submit: <i>Thermodynamics Assignment</i>
Review for Final Exam	May 5	
Final Exam	May 10	Due May 10 <ul style="list-style-type: none"> Complete and Submit: <i>Physics Concept Inventory</i>

*All due times are 11:59 PM CST, unless otherwise specified

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- ¹ <https://www.angelo.edu/current-students/student-handbook/>
 - ² <https://www.angelo.edu/academics/catalog/>
 - ³ <https://www.angelo.edu/live/files/27603-student-handbook-2020-21#page=96>
 - ⁴ <https://www.angelo.edu/current-students/disability-services/>
 - ⁵ <https://www.angelo.edu/content/files/14197-op-1011-grading-procedures>
 - ⁶ <https://www.angelo.edu/live/files/27603-student-handbook-2020-21#page=96>
 - ⁷ https://www.angelo.edu/current-students/writing-center/academic_honesty.php
 - ⁸ <https://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of>
 - ⁹ <http://www.angelo.edu/incident-form>
 - ¹⁰ <https://www.angelo.edu/title-ix>