

# PHYSICS 212501Z

## FUNDAMENTALS OF PHYSICS I LABORATORY

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Office: Vincent 125

**Office Hours: By email appointment**

## Course Information

### Course Description

Laboratory experiences designed to accompany Physics 2325. Emphasis is placed on experiments utilizing the fundamental concepts of mechanics and thermodynamics.

### Prerequisite and Co-requisite Courses

None.

### Prerequisite Skills

Ability to download and install GNUPlot software, use Blackboard, Notepad, and a scientific or online calculator capable of standard deviation calculations are expectations of this course.

### Student Learning Outcomes

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

- Acquire skills in working with others as a member of a team
- Learn appropriate methods for collecting, analyzing, and interpreting numerical information

### Course Delivery

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

### Required Texts and Materials

- Physics 2125 Laboratory Manual (Charles Allen, 2022)
- Scientific calculator with one-variable statistics (average and standard deviation)

### Technology Requirements

To successfully complete this course, students need to use a scientific calculator, Blackboard, and a graphing program like GNUPlot, Microsoft Excel or Google Sheets.

## 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.

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.

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
Prelab Assignments	20
Lab Reports	60
Practicum	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

You are responsible for studying each lab prior to the lab meeting and completing the pre-lab assignment. All pre-lab assignments must be turned in before lab starts. Late pre-labs will incur a 20% penalty. If you arrive at lab a few minutes late, immediately turn your pre-lab in to the instructor. Each lab report is to be completed and handed in at the end of the lab period including all data, calculations, and answers to questions. Your lowest lab score (pre-lab plus report) will be dropped before calculating your final lab grade.

All students enrolled in a laboratory science course are required to complete ASU Lab Safety and Chemical Hygiene training located in Blackboard prior to attending the third lab session of the semester or term.

# 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](#)<sup>1</sup>
- [Angelo State University Catalog](#)<sup>2</sup>

## 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](#).<sup>3</sup>

## 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](mailto:ADA@angelo.edu). For more information about the application process and requirements, visit the [Student Disability Services website](#).<sup>4</sup> 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](mailto: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](#)<sup>5</sup> for more information.

## Plagiarism

Plagiarism is a serious topic covered in ASU's [Academic Integrity policy](#)<sup>6</sup> 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](#).<sup>7</sup>

## 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](#)<sup>8</sup> 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](mailto:michelle.boone@angelo.edu)

You may also [file a report online](#)<sup>9</sup> 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](#).<sup>10</sup>

# Modifications to the Syllabus

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

## Course Schedule

Week of	Lab
Jan 17	<b>No Lab, Purchase Lab Manual</b>
Jan 24	Introduction to Lab Reports
Jan 31	Motion with Constant Acceleration
Feb 7	Projectile Motion*
Feb 14	<b>No Lab</b>
Feb 21	Newton's Second Law
Feb 28	Conservation of Energy
Mar 7	Momentum and Collisions
Mar 14	<b>Spring Holidays</b>
Mar 21	Rotational Equilibrium
Mar 28	Archimede's Principle
Apr 4	The Pendulum
Apr 11	<b>No Lab</b>
Apr 18	Speed of Sound
Apr 25	Ideal Gas Law
May 2	<b>Lab Practicum</b>
May 9	<b>No Lab, Final Exam Week</b>

\*ASU Lab Safety and Chemical Hygiene training completed prior to attending lab.

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<sup>1</sup> <https://www.angelo.edu/current-students/student-handbook/>

<sup>2</sup> <https://www.angelo.edu/academics/catalog/>

<sup>3</sup> <https://www.angelo.edu/live/files/27603-student-handbook-2020-21#page=96>

<sup>4</sup> <https://www.angelo.edu/current-students/disability-services/>

<sup>5</sup> <https://www.angelo.edu/content/files/14197-op-1011-grading-procedures>

<sup>6</sup> <https://www.angelo.edu/live/files/27603-student-handbook-2020-21#page=96>

<sup>7</sup> [https://www.angelo.edu/current-students/writing-center/academic\\_honesty.php](https://www.angelo.edu/current-students/writing-center/academic_honesty.php)

<sup>8</sup> <https://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of>

<sup>9</sup> <http://www.angelo.edu/incident-form>

<sup>10</sup> <https://www.angelo.edu/title-ix>