

# FUNDAMENTALS OF PHYSICS I

PHYS 2325, SECTION 010

SPRING 2022

MWF 10:00–10:50AM

VIN 160

## CONTACT INFORMATION

**Dr. Michael C. Holcomb**

Office: VIN 123 and Dr. Holcomb's  
Virtual Office

Phone: [325.486.6787](tel:325.486.6787)

Email: [michael.holcomb@angelo.edu](mailto:michael.holcomb@angelo.edu)

Webpage: [www.mcholcomb.com/teaching](http://www.mcholcomb.com/teaching)

## Office Hours

**Monday, Wednesday, Friday**

11:00am–12:15pm

**Tuesday, Thursday**

9:00am–10:45am

Also available by appointment or whenever  
my door is open!

## REQUIRED MATERIALS

1. University Physics Vol. 1 by OpenStax (ISBN: 9781938168277) – [Get a free digital textbook at openstax.org.](https://openstax.org/textbook/university-physics-volume-1)
2. University Physics Vol. 2 by OpenStax (ISBN: 9781938168161) – [Get a free digital textbook at openstax.org.](https://openstax.org/textbook/university-physics-volume-2)
3. TopHat.com access – [Learn about TopHat on the ASU website.](https://www.tophat.com/)
4. Gradescope account – Free to ASU students; you will receive an email with sign-up information.
5. Access to a computer with reliable high-speed internet access.
6. Access to a scanning device OR a handwriting-capable computer or tablet.

# CONTENTS

CONTACT INFORMATION .....	1
REQUIRED MATERIALS.....	1
COURSE OVERVIEW.....	2
COURSE COMPONENTS .....	2
GRADING POLICIES .....	4

STRATEGIES FOR SUCCESS .....	4
INCLUSIVE LEARNING ENVIRONMENT .....	5
ACADEMIC INTEGRITY .....	7
GENERAL POLICIES RELATED TO THIS COURSE.....	8
MODIFICATIONS TO THE SYLLABUS.....	8
CLASSROOM ETIQUETTE .....	8
COURSE CALENDAR .....	9

# PHYS 2325

## COURSE OVERVIEW

### FUNDAMENTALS OF PHYSICS I

PHYS 2325

Section 010

CRN 20363

MWF 10:00-10:50am

VIN 160

This course will cover kinematics, translational mechanics, rotational mechanics, statics, gravity, fluids, mechanical waves, and thermodynamics.

This course is intended to acquaint students with the scientific method and basic laws of physics, to help students develop a better understanding of physical science in general and develop reasoning skills and strategies to prepare them for other upper-division physics and engineering classes. To this end, the course will emphasize a mix of conceptual understanding and traditional end-of chapter problem solving skills.

### Expected Learning Outcomes

The expected learning outcomes for the course, listed below, will be assessed through performance on guided classroom discussions and embedded questions within the exams.

- Be able to apply scientific reasoning and critical thinking to the solution of problems.
- Gain an understanding of fundamental principles, generalizations, and formulae.
- Develop and demonstrate technical knowledge of major topics outlined in the course overview.

## COURSE COMPONENTS

### Lecture & Participation

Lecture will be offered in a modified traditional format. All students will be expected to attend lecture face-to-face and are strongly encouraged to wear face coverings. Please thoroughly read the section of this syllabus regarding classroom etiquette for further information on expectations for lecture attendance.

### TopHat

We will use TopHat this term during lecture to take attendance, administer quizzes, and complete conceptual checkpoints that will contribute to your participation grade in the course. TopHat offers a discounted price for ASU students. Register your account at [www.TopHat.com](http://www.TopHat.com) using your legal name, ASU email, and ASU Campus ID number (ex: 87654321). The course code is **264209**.



Attendance is considered mandatory and will be taken daily. Attendance will directly contribute to your participation grade in the course. Students will be able to report their attendance daily via TopHat and a spirit of honesty will be maintained in the attendance policy. Note that you are responsible for everything that we do in lecture, so it is to your advantage to attend.

Additionally, conceptual checkpoints are an integrated part of lecture and will be administered unannounced using TopHat. These checkpoints will only be graded for completion and will sometimes be used as the subject of guided class discussion. Conceptual checkpoints will not have makeup opportunities.

### Lecture Preparation

You are expected to have access to the assigned texts, paper for notes, and a suitable writing utensil (preferably a pencil with an eraser), and a scientific calculator at every class meeting. If you have access to a handwriting capable tablet, it may be used in place of paper for notetaking. You will likely find it helpful to read ahead in the textbook before each class.



### Homework

Homework will be assigned regularly; however, will *not* be collected. Even though homework is not part of your final grade, it is not in any way optional; it is crucial for your understanding of the course material.

### Exams

Five (5) take home exams will be administered as scheduled. No makeup exams will be given, so please plan accordingly. All exams will be made available via Blackboard and you are expected to print a copy of the exam, scan your completed exam to PDF, and then submit for grading via Gradescope. Please see the course calendar on the last page of this syllabus for scheduled exam dates and anticipated content.

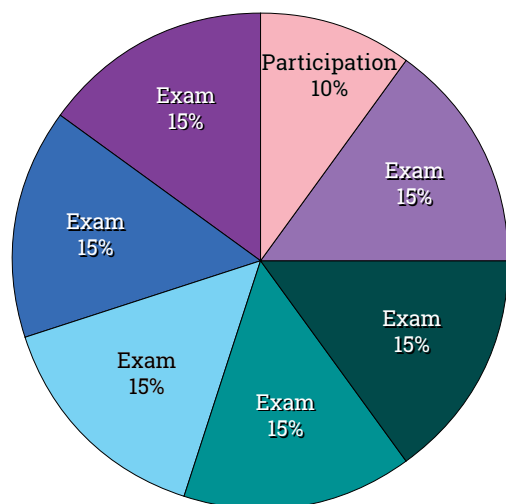
### Exam Rules

Calculators, the assigned textbook, instructor-provided materials, and your own lecture notes are permitted. Cell phones and smart watches are not considered to be calculators regardless of what apps may have been installed. Any other reference materials (including sources found via the internet) are not permitted.

If I believe that you have made use of restricted materials or devices during the exam, you will be issued a zero for the exam without exception and may be reported to the Office of Student Conduct for further disciplinary action.

## GRADING POLICIES

The following scores will be recorded during the course of the semester: Participation, Exam 1, Exam 2, Exam 3, Exam 4, Exam 5, Final Exam. The course grade will be the weighted average of Participation at 10% and Exams at 15% each.

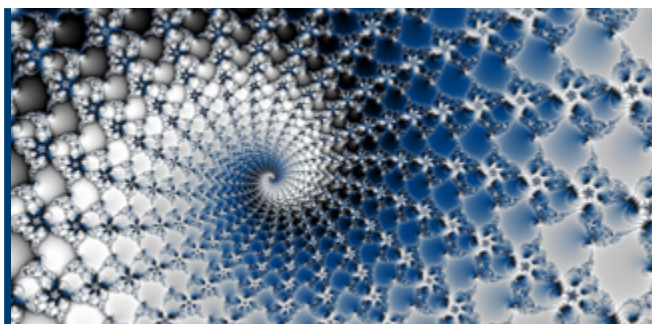


There are no makeup exams; however, the final exam score can replace the lowest midterm. In other words, the six highest scores from Exam 1, Exam 2, Exam 3, Exam 4, Exam 5, Final Exam, and Final Exam will be considered for the course grade.

Your letter grade will be determined on the following scale: F ( $\leq 49$ ), D (50-64), C (65-79), B (80-89), A (90-100). The instructor reserves the right to lower the boundaries between letter grades at their discretion. The boundaries will never be raised above what is shown.

### 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 for more information.](#)



## STRATEGIES FOR SUCCESS

Be prepared! These tips will help you keep up, make for more productive classroom interaction, and help you be prepared for homework, labs, and exams that make up your semester grade.

- Pay special attention to examples worked in class.
- Study your notes.
- Read the material in the text before we cover it in class.
- Begin all homework assignments as soon as possible. Don't get behind or wait until just before an exam to begin.
- Make use of the free in-person and online tutoring services available through the Tutoring Center.
- If you are stuck, come prepared with questions during office hours or make an appointment to meet at another time.
- Once you can work through a problem with your notes, book, study group, etc., be sure you can rework it entirely on your own.
- Don't "blow off" any exam just because there is a dropped score. The purpose of the dropped score is in case of illness or other extenuating circumstances.



## **INCLUSIVE LEARNING ENVIRONMENT** *(Adapted from Yale Center for Teaching and Learning)*

### **Civility and Respect**

Our university supports and wants to foster a civil, respectful, and open-minded climate so that all of us can live and work in an environment free of harassment, bias-motivated behaviors, unfair treatment, and fear. The university expects all members of our community to refrain from actions or behaviors that intimidate, humiliate, or demean persons or groups or that undermine their security or self-esteem based on traits related to race, ethnicity, country of origin, religion, gender identity/expression, sexual orientation, age, or physical or mental ability, including learning and/or developmental disabilities and past/present history of mental disorder or other category protected by state or federal law.

### **Student Disability Services**

Angelo State University 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](#).

The employee charged with the responsibility of reviewing and authorizing accommodation requests is:

**Dallas A. Swafford**

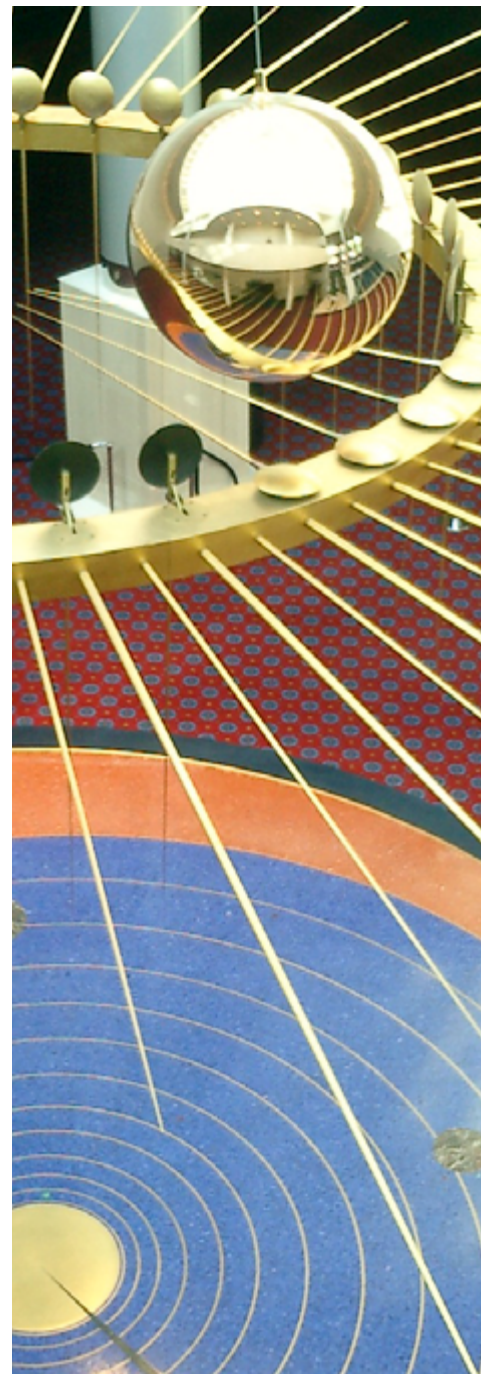
**Director of Student Disability Services**

Email: [dallas.swafford@angelo.edu](mailto:dallas.swafford@angelo.edu)

Houston Harte University Center, Room 112

Office Email: [ada@angelo.edu](mailto:ada@angelo.edu)

Office Phone: [325.942.2047](tel:325.942.2047)



## Title IX

Angelo State University is committed to providing and strengthening an educational, working, and living environment where students, faculty, staff, and visitors are free from sex discrimination of any kind. In accordance with Title VII, Title IX, the Violence Against Women Act (VAWA), the Campus Sexual Violence Elimination Act (SaVE), and other federal and state laws, the University prohibits discrimination based on sex, which includes pregnancy, and other types of Sexual Misconduct. Sexual Misconduct is a broad term encompassing all forms of gender-based harassment or discrimination and unwelcome behavior of a sexual nature. The term includes sexual harassment, nonconsensual sexual contact, nonconsensual sexual intercourse, sexual assault, sexual exploitation, stalking, public indecency, interpersonal violence (domestic violence or dating violence), sexual violence, and any other misconduct based on sex.

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 Boone, J.D.**

**Director of Title IX Compliance and Title IX Coordinator**

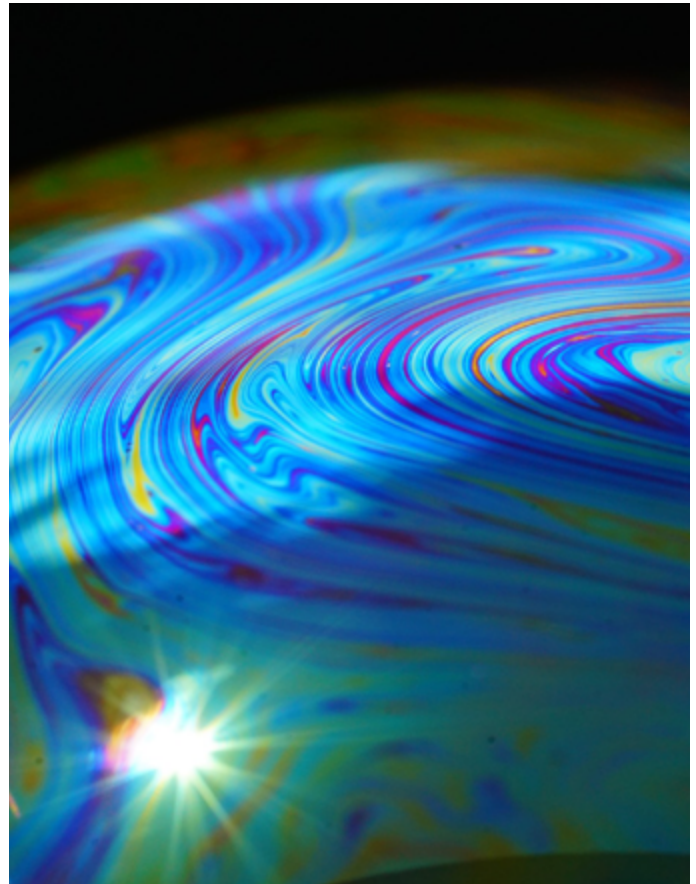
Email: [michelle.boone@angelo.edu](mailto:michelle.boone@angelo.edu)

Mayer Administration Building, Room 210

Office Phone: [325.942.2022](tel:325.942.2022)

Report an incident: [www.angelo.edu/incident-form](http://www.angelo.edu/incident-form)

For more information about resources related to sexual misconduct, Title IX, or Angelo State's policy please visit: [www.angelo.edu/title-ix](http://www.angelo.edu/title-ix).



**Note from Dr. Holcomb:** As a faculty member at Angelo State, I am a mandatory reporter and am obligated to report incidents involving sexual misconduct to the Title IX Coordinator. Should you wish to speak to someone in confidence about an issue, you may contact the University Counseling Center (325.942.2371), the 24-Hour Crisis Helpline (325.486.6345), or the University Health Clinic (325.942.2171).

## 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](#) for more information.



## 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 [Statement of Academic Integrity](#).

### Plagiarism

Plagiarism is a serious topic covered in ASU's [Academic Integrity policy](#) 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](#).

### Copyright Policy

Students officially enrolled in this course should make only one printed copy of the given articles and/or chapters. You are expressly prohibited from distributing or reproducing any portion of course readings in printed or electronic form without written permission from the copyright holders or publishers.



## 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](#)
- [Angelo State University Catalog](#)

## MODIFICATIONS TO THE SYLLABUS

All components of this syllabus are subject to modification at the lecturer's discretion. In particular, the ongoing COVID-19 pandemic may require changes in course delivery, grade evaluation, schedule, and content on potentially short notice.



## CLASSROOM ETIQUETTE

Attending lecture is mandatory. You are considered both advised and responsible for anything discussed during lecture. Leaving lecture early or arriving late is considered both rude and distracting. If you have an expected reason to depart early, please inform the lecturer at the beginning of class.

All students are expected to be respectful of their peers during lecture by not becoming a distraction. If you become a distraction to other students, then you will be dismissed from class for that day. Some actions, including but not limited to the following, will result in you being considered a distraction to your peers: repeatedly arriving late, reading unrelated material, using your cell phone in any way outside of approved exercises, visiting with your neighbor, sleeping, eating, "vaping," and the use of any and all tobacco products.

No laptops or any other electronic devices are allowed in class unless the need for such a device for reason of a disability is documented by Student Disability Services.



# COURSE CALENDAR



Our tentative course calendar is below. I reserve the right to change this calendar as needed; however, I will inform you in class and via Blackboard announcement in advance of any changes.

Remember to check our Blackboard class page regularly for assigned readings and homework. Also remember to check your university email (RamMail) account regularly for class updates and other important university correspondence.

Week of	Events	Lecture Topic	Chapter
Jan. 17	<b>Wednesday, Jan. 19:</b> First class meeting <b>Friday, Jan 21:</b> Last day to make schedule changes for this term	Introduction Kinematics	V1:1 V1:2-4
Jan. 24		Kinematics	V1:2-4
Jan. 31	<b>Thursday, Feb 03:</b> Drops and withdrawals are now recorded on transcripts	Kinematics Forces	V1:2-4 V1:5-6
Feb. 07	<b>Friday, Feb. 11: Exam 1 Assigned</b> (Ch. 1-4)	Forces	V1:5-6
Feb. 14	<b>Monday, Feb. 14: Exam 1 DUE</b> at 11:59pm via Gradescope	Forces Circular Motion	V1:5-6 V1:4
Feb. 21	<b>Friday, Feb. 25: Exam 2 Assigned</b> (Ch. 4-6)	Work	V1:7
Feb. 28	<b>Monday, Feb. 28: Exam 2 DUE</b> at 11:59pm via Gradescope	Energy	V1:8
Mar. 07		Linear Momentum	V1:9
Mar. 14	<i>Spring Break – No class</i>		
Mar. 21	<b>Friday, Mar. 25: Exam 3 Assigned</b> (Ch. 7-9)	Rotational Motion	V1:10
Mar. 28	<b>Monday, Mar. 28: Exam 3 DUE</b> at 11:59pm via Gradescope	Angular Momentum	V1:11
Apr. 04		Statics	V1:12
Apr. 11	<b>Friday, Apr. 15: Exam 4 Assigned</b> (Ch. 10-12)	Gravity and Orbits	V1:13
Apr. 18	<b>Monday, Apr. 18: Exam 4 DUE</b> at 11:59pm via Gradescope	Fluids	V1:14
Apr. 25	<b>Thursday, Apr. 28:</b> Last day to drop or withdraw for this term <b>Friday, Apr. 29: Exam 5 Assigned</b> (Ch. 13-14)	Mechanical Waves	V1:15-16
May 02	<b>Monday, May 02: Exam 5 DUE</b> at 11:59pm via Gradescope <b>Friday, May 06:</b> Last class meeting <b>Saturday, May 07: Comprehensive Final Exam Assigned</b>	Thermodynamics	V2:2-4
May 09	<b>Wednesday, May 11: Comprehensive Final Exam DUE</b>		