

PHYS 2326 010

Fundamentals of Physics II



Instructor: Scott Williams

Email: scott.williams@angelo.edu

Office: VIN 128

Office Hours: MWF 12:00 – 13:00 and TR 13:00 – 14:00

Course Information

Course Description

A comprehensive course with emphasis placed on the capacity to utilize the fundamental concepts of electricity, magnetism, and optics in the solution of problems

Prerequisite and Co-requisite Courses

PHYS 2325/2125 (or equivalent) and MATH 2414 (or equivalent)

Student Learning Outcomes

Upon completion of Physics 2326, students will have an increased understanding of the fundamental concepts, theories, and physical laws relevant to the broad topical areas of electricity, magnetism, circuits, and optics. Students will have practiced and demonstrated a satisfactory level of mastery in critical reading, critical thinking, and problem-solving skills. Students will have engaged in quantitative laboratory experimentation; practiced sound scientific laboratory methods; and utilized a variety of different laboratory measurement techniques, general laboratory skills, data analysis procedures, and error propagation techniques. Students will also develop and improve technical communication skills required for scientific reporting. These outcomes will be assessed using quiz grades.

Course Delivery

This is a face-to-face course with online components that students are expected to access in [Blackboard](#).¹

Required Texts and Materials

"University Physics, Volume II" by OpenStax

"University Physics, Volume III" by OpenStax

Scientific calculator

Grading

Evaluation and Grades

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

Assessment	Percent of Total Grade
Homework Average	25%
Quiz Average	50%
Final Exam	25%
Total	100%

Grading System

Course grades will depend on completing course requirements and meeting the student learning outcomes.

This course uses the following grading scale:

A	90% – 100%
B	80% – 89%
C	70% – 79%
D	60% – 69%
F	0% – 59%

Assignment and Activity Descriptions

Homework problems are intended to help students prepare for quizzes. Homework assignments should be turned in through Blackboard. *Absolutely no late work is accepted.* Use of electronic devices (telephones, computers, music players, etc.) during lectures or quizzes is not allowed. All electronic devices should be turned off during class. *Quizzes may not be made up unless in the event of a university-excused absence*, in which case it is the student's responsibility to schedule a time to make-up the missed quiz *before* the quiz is given to the rest of the class. *Any form of cheating (which includes plagiarism) will result in a grade of F for the course.*

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](#)²
- [Angelo State University Catalog](#)³

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](#).⁴

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](#).⁵ The employee charged with the responsibility of reviewing and authorizing accommodation requests is:

Dr. 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](#)⁶ for more information.

Plagiarism

Plagiarism is a serious topic covered in ASU's [Academic Integrity policy](#)⁷ 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](#).⁸

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](#)⁹ for more information.

Title IX at Angelo State University

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.

You are encouraged to report any incidents involving sexual misconduct to the Office of Title IX Compliance and the Director of Title IX Compliance/Title IX Coordinator, Michelle Miller, J.D. You may submit reports in the following manner:

Online: [Incident Reporting Form](#)¹⁰

Face to Face: Mayer Administration Building, Room 210

Phone: 325-942-2022

Email: michelle.miller@angelo.edu

Note, as a faculty member at Angelo State, I am a mandatory reporter and must 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).

For more information about resources related to sexual misconduct, Title IX, or Angelo State's policy please visit the [Title IX website](#).¹¹

Information About COVID-19

Please refer to ASU's [COVID-19 \(Coronavirus\) Updates](#)¹² web page for current information about campus guidelines and safety standards as they relate to the COVID-19 pandemic.

Modifications to the Syllabus

This syllabus, including grade evaluation and course schedule, is subject to modification on potentially short notice based on developing circumstances.

Course Schedule

19 January – 24 January	Reflection & Refraction (Vol. III, Chap. 1)
26 January – 28 January	Geometric Optics (Vol. III, Chap. 2)
31 January – 4 February	Wave Optics (Vol. III, Chaps. 3 & 4)
7 February	Review
9 February	Quiz #1
11 February – 16 February	Electric Fields & Coulomb's Law (Vol. II, Chap. 5)
18 February – 21 February	Gauss's Law & Electric Flux (Vol. II, Chaps. 6 & 7)
23 February – 25 February	Electric Potential (Vol. II, Chaps. 6 & 7)
28 February – 2 March	Capacitance (Vol. II, Chap. 8)
4 March	Review
7 March	Quiz #2
9 March – 11 March	Current & Resistance (Vol. II, Chaps. 9 & 10)
21 March – 23 March	Kirchhoff's Rules & RC Circuits (Vol. II, Chaps. 9 & 10)
25 March – 28 March	Magnetic Fields (Vol. II, Chap. 11)
30 March – 1 April	Calculating Magnetic Fields (Vol. II, Chap. 12)
4 April	Review
6 April	Quiz #3
8 April – 15 April	Faraday's Law & Inductors (Vol. II, Chaps. 13 & 14)
18 April – 20 April	AC Circuits (Vol. II, Chap. 15)
22 April – 25 April	The Electromagnetic Spectrum (Vol. II, Chap. 16)
27 April	Review

29 April
2 May – 6 May
11 May (13:00 – 15:00)

Quiz #4
Review
Final Exam

-
- ¹ <https://blackboard.angelo.edu/>
 - ² <https://www.angelo.edu/current-students/student-handbook/>
 - ³ <https://www.angelo.edu/academics/catalog/>
 - ⁴ <https://www.angelo.edu/live/files/27603-student-handbook-2020-21#page=96>
 - ⁵ <https://www.angelo.edu/current-students/disability-services/>
 - ⁶ <https://www.angelo.edu/content/files/14197-op-1011-grading-procedures>
 - ⁷ <https://www.angelo.edu/live/files/27603-student-handbook-2020-21#page=96>
 - ⁸ https://www.angelo.edu/current-students/writing-center/academic_honesty.php
 - ⁹ <https://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of>
 - ¹⁰ <https://www.angelo.edu/incident-form>
 - ¹¹ <https://www.angelo.edu/title-ix>
 - ¹² <https://www.angelo.edu/covid-19/>