

PHYS–1302–020

General Physics II



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Office Hours: MWF 08:30-09:30, MTWR 11:00-12:00, or by appointment

Course Information

Course Description

Study of electricity, magnetism, light, and atomic physics. (This course will not count as the introductory physics course for physics majors and pre-engineering majors.)

Prerequisite and Co-requisite Courses

Physics 1301 or equivalent, and Mathematics 1314 or equivalent.

Prerequisite Skills

Students are to be proficient with a scientific calculator, algebra, and trigonometry.

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

Required Texts and Materials

The textbook [College Physics](#) is available from OpenStax College for free. You will also need a scientific calculator. You do not need to purchase this textbook. 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 Blackboard, a scientific calculator, 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 Collaborate.

Grading

Evaluation and Grades

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

Assessment	Points
Daily Worksheet/Poll Questions (approx.)	520
Chapter Quizzes (12 chapters, 54 points each)	648
Total	1168
Homework (bonus points, approx.)	210

The worksheet and homework points may vary a bit as individual problems are either removed or added.

Grading System

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

This course uses the following grading scale:

A = 1051 to max points (90% of 1168)

B = 934 to 1050 points (80% of 1560)
C = 817 to 933 points (70% of 1560)
D = 700 to 816 points (60% of 1560)
F = 0 to 699 points

Assignment and Activity Descriptions

Daily in-class questions will be completed in groups using handouts, or potentially presented using Blackboard Collaborate if hybrid or online teaching modalities are required.

For handouts, a scratchoff card system is used. The number of choices "scratched off" to obtain the correct answer determines the number of points for that problem (4 points maximum).

If Blackboard poll questions are required (only if a hybrid or online teaching modality is adopted), students will use the Blackboard Collaborate poll tool. Student responses are recorded. In this case, each question will be scored as:

- 4 points for the correct answer
- 3 points for an incorrect answer
- 1 point if the student is logged in but does not answer
- 0 points if the student is not logged in

Approximately 10-12 poll questions per chapter will be asked. Students must be physically present in class unless a disability waiver has been issued or a hybrid or remote teaching modality has been adopted.

Each chapter has an associated chapter **Quiz**. These in-person quizzes are given 2 quizzes at a time, but are scored separately. Each quiz contains 6 multiple choice questions with 5 choices. The IFAT "scratchoff" system will be used to give partial credit for incorrect answers. Each question will be scored as:

- 9 points if the correct answer is the only answer chosen
- 7 points if one incorrect answer (and the correct answer) is chosen
- 5 points if two incorrect answers (and the correct answer) are chosen
- 3 points if three incorrect answers (and the correct answer) are chosen
- 1 point if all answers are chosen

The Daily and Quiz points total to (approximately) 1168 points.

Optional online **Homework** problems are treated as bonus points. Each homework problem is a separate Blackboard assignment. In Blackboard, the "points" available for each problem will show as 0, which is how they get treated as bonus points. The last number in the name of the assignment is how many points you will receive for successfully completing the problem and turning in a screenshot of the resulting certificate with your name on it. You can complete as many or as few homework

problems as you like. You will receive full credit if a homework problem is completed before the associated chapter quiz. You may turn in homework problems late for half credit. Each homework problem is worth 1-3 points.

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

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.

Week	Date	Chapter	Topic
1	Jan 19	[Introduction]	[Course introduction]
1	Jan 21	18A	Electric Charge and Electric Field
2	Jan 24	18B	Electric Charge and Electric Field
2	Jan 26	18C	Electric Charge and Electric Field
2	Jan 28	19A	Electric Potential and Electric Field
3	Jan 31	19B	Electric Potential and Electric Field
3	Feb 2	19C	Electric Potential and Electric Field
3	Feb 4	Q-18, Q-19	Chapter quizzes
4	Feb 7	20A	Electric Current, Resistance, and Ohm's Law
4	Feb 9	20B	Electric Current, Resistance, and Ohm's Law
4	Feb 11	20C	Electric Current, Resistance, and Ohm's Law
5	Feb 14	21A	Circuits and DC Instruments
5	Feb 16	21B	Circuits and DC Instruments
5	Feb 18	21C	Circuits and DC Instruments
6	Feb 21	Q-20, Q-21	Chapter quizzes
6	Feb 23	22A	Magnetism
6	Feb 25	22B	Magnetism
7	Feb 28	22C	Magnetism
7	Mar 2	24A	Electromagnetic Waves
7	Mar 4	24B	Electromagnetic Waves
8	Mar 7	Q-22, Q-24	Chapter quizzes
8	Mar 9	25A	Geometric Optics
8	Mar 11	–	[spare (in case of snow days, etc.)]
9	Mar 21	25B	Geometric Optics
9	Mar 23	25C	Geometric Optics
9	Mar 25	26A	Vision and Optical Instruments
10	Mar 28	26B	Vision and Optical Instruments
10	Mar 30	26C	Vision and Optical Instruments
10	Apr 1	Q-25, Q-26	Chapter quizzes
11	Apr 4	27A	Wave Optics
11	Apr 6	27B	Wave Optics
11	Apr 8	27C	Wave Optics
12	Apr 11	29A	Introduction to Quantum Physics
12	Apr 13	29B	Introduction to Quantum Physics
12	Apr 15	–	[spare (in case of snow days, etc.)]
13	Apr 18	29C	Introduction to Quantum Physics
13	Apr 20	Q-27, Q-29	Chapter quizzes
13	Apr 22	30A	Atomic Physics
14	Apr 25	30B	Atomic Physics
14	Apr 27	30C	Atomic Physics
14	Apr 29	31A	Radioactivity and Nuclear Physics
15	May 2	31B	Radioactivity and Nuclear Physics
15	May 4	31C	Radioactivity and Nuclear Physics
15	May 6	–	Post-course assessment
16	May 9	Q-30, Q-31	Chapter Quizzes at 10:30

Modifications to the Syllabus

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

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- 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/>