PHYS 2326.010
Fundamentals of Physics II
Spring 2020, MWF 10:00am – 10:50am, VIN 147

Instructor: Dr. Eddie ‘Trey’ Holik III
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Office: VIN 121

Office Hours: TR 9a – 9:30a & 11a – 12p, MWF 9a – 10a, and by appt.

Course Information

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

Prerequisite and Co-requisite Courses
Concurrent enrollment in, or credit for, Physics 2126 and Mathematics 2414 is required.

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 also develop and improve technical communication skills required for scientific reporting. These outcomes will be assessed using online Blackboard homeworks, daily grades, and test grades.

Required Texts and Materials
Any calculus-based physics text will work for this course. Lectures will follow University Physics from Openstax, Volume II and Volume III. If you prefer a hard copy of a text, then check online for old editions of Halliday, Serway, Openstax, etc... For lab, you need Physics 2126 Laboratory Manual (2020) available from the University Bookstore. You also need a calculator.
Course Schedule

<table>
<thead>
<tr>
<th>Week of</th>
<th>Course Schedule (ref. Open Stax Phys. Vol II, III)</th>
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</thead>
<tbody>
<tr>
<td>13-Jan</td>
<td>The Nature of Light (Volume III, Unit 1, Chapter 1)</td>
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<tr>
<td>20-Jan</td>
<td>Geometric Optics and Image Formation (Volume III, Unit 1, Chapter 2)</td>
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<tr>
<td>27-Jan</td>
<td>Interference and Diffraction (Volume III, Unit 1, Chapter 3 &amp; 4)</td>
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<tr>
<td>3-Feb</td>
<td>Review/Exam 1</td>
</tr>
<tr>
<td>10-Feb</td>
<td>Electric Charges and Fields, Gauss' Law (Volume II, Unit 2, Chapter 5 &amp; 6)</td>
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<tr>
<td>17-Feb</td>
<td>Electric Potential and Capacitance (Volume II, Unit 2, Chapter 7 &amp; 8)</td>
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<tr>
<td>24-Feb</td>
<td>Review/Exam 2</td>
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<tr>
<td>2-Mar</td>
<td>Current, Resistance, DC circuits (Volume II, Unit 2, Chapter 9 &amp; 10)</td>
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<tr>
<td>9-Mar</td>
<td>Spring Break</td>
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<tr>
<td>16-Mar</td>
<td>Magnetic Forces, Fields, and Sources (Volume II, Unit 2, Chapter 11 &amp; 12)</td>
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<tr>
<td>23-Mar</td>
<td>Review/Exam 3</td>
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<tr>
<td>30-Mar</td>
<td>Electromagnetic Induction/Inductance (Volume II, Unit 2, Chapter 13 &amp; 14)</td>
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<tr>
<td>6-Apr</td>
<td>AC circuits (Volume II, Unit 2, Chapter 15) <strong>(Moon Lectures 7-Apr)</strong></td>
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<tr>
<td>13-Apr</td>
<td>EM waves (Volume II, Unit 2, Chapter 16)</td>
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<tr>
<td>20-Apr</td>
<td>Review/Exam 4</td>
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<tr>
<td>4-May</td>
<td>Monday 10:30am Comprehensive Final Exam</td>
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Grading

**Evaluation and Grades**

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

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Percent of Total Grade</th>
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</thead>
<tbody>
<tr>
<td>Homework</td>
<td>25</td>
</tr>
<tr>
<td>Daily Grades</td>
<td>10</td>
</tr>
<tr>
<td>Four Exams</td>
<td>40</td>
</tr>
<tr>
<td>Final</td>
<td>20</td>
</tr>
<tr>
<td>Moon Lecture</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

Grading will traditionally be determined as >90 = A, >80 = B, >70 = C, >60 = D, <59 = F.
Policies

Mobile phones and music players must be silenced at all times. Use of any electronic device other than your calculator during a test is not allowed. There are no make-up opportunities for quizzes or in-class activities. Homework will be assigned approximately once a week online with clearly articulated due dates. You will have as many chances to solve the homework as necessary before the due date to master the material. You are encouraged to print these assignments for exam study. Late homeworks will not be accepted!

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](#)

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](#).

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](#).
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* for more information.

**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.

**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* 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 Boone, J.D.
Director of Title IX Compliance/Title IX Coordinator
Mayer Administration Building, Room 210
325-942-2022
michelle.boone@angelo.edu

You may also file a report online 24/7 at www.angelo.edu/incident-form.

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 about Title IX in general you may visit www.angelo.edu/title-ix.

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1 https://www.angelo.edu/student-handbook/
2 https://www.angelo.edu/catalogs/
3 https://www.angelo.edu/student-handbook/community-policies/academic-integrity.php
4 https://www.angelo.edu/services/disability-services/
5 https://www.angelo.edu/content/files/14197-op-1011-grading-procedures
6 https://www.angelo.edu/student-handbook/community-policies/academic-integrity.php
7 https://www.angelo.edu/dept/writing_center/academic_honesty.php
8 https://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of