PHYS 2126, Spring 2021
Fundamentals of Physics II LAB

Section 01z, Carrell: M 2:00pm – 4:50pm, VIN 160
Section 02z, Holik: T 2:00pm – 4:50pm, VIN 160

Instructor: Dr. Eddie ‘Trey’ Holik III
Email: eddie.holik@angelo.edu
Phone: 325-942-5452
Office: VIN 121
Office Hours: MTWRF 11a – 12p, and by appt.

Instructor: Dr. Kenneth Carrell
Email: kenneth.carrell@angelo.edu
Phone: 325-942-2136 ext. 6889
Office: VIN 120

Course Information

Required Texts and Materials
A scientific calculator with one-variable statistics (average and standard deviation)

Course Description
Laboratory experiences designed to accompany Physics 2326. Emphasis is placed on experiments using the fundamental concepts of electricity, magnetism, and optics.

Prerequisite and Co-requisite Courses
Concurrent enrollment in, or credit for, Physics 2326 and Mathematics 2414 is required.

Student Learning Outcomes
Upon completion of Physics 2126, 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 laboratory report grades.

Course Delivery
To maintain academic quality while accommodating social distancing needs this semester, this course will use a split delivery model that combines face-to-face teaching with remote instruction. The goal is to provide face-to-face instruction to students who want to return to campus, while also allowing students who may need to learn remotely to participate via virtual class sessions.

How does it work?
Your class will be divided and you will be placed into a smaller group of students to maintain physical distancing requirements in our assigned classroom space. Your assigned group will receive a schedule of in-person class meetings. This schedule is not flexible. For instance, if you are supposed to attend class on a Monday, you cannot elect to go on Wednesday with another class group instead. When you are not in the physical class, you will attend live remote sessions at the same time as our scheduled course. You will also be expected to complete coursework via Blackboard.¹ Please refer to this Health and Safety web page² for updated information about campus guidelines as they relate to the COVID-19 pandemic.

Policies
Mobile phones and music players must be turned off at all times. Note that this means that you cannot use a mobile phone as your calculator. Use of any electronic device other than your calculator during laboratories is not allowed. Prelab assignments are due at the beginning of lab meetings; no late prelabs will be accepted. Students must turn in their own prelabs. Laboratory groups consisting of 2 or 3 people will also turn in group laboratory reports.

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 within 24 hours during working hours Monday through Friday. Weekend messages may not be returned until Monday.
<table>
<thead>
<tr>
<th>Week of</th>
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<tbody>
<tr>
<td>25-Jan</td>
<td>No Lab</td>
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</table>
| **1-Feb** | In Blackboard:  
  • Review *Lab Expectations* Video  
  • Review *Syllabus*  
  • Determine your assigned Group 1 or 2 by clicking on *A and B Groups*  
  • Complete and Submit: *Introduction to Lab Reports* |
| 8-Feb | In VIN 162:  
  • Group 1 Complete and Submit: *Refraction and Snell’s Law* |
| 15-Feb | In VIN 162:  
  • Group 2 Complete and Submit: *Refraction and Snell’s Law* |
| 22-Feb 1-Mar | In Blackboard:  
  • Complete and Submit: Lenses |
| **4-Mar** 8-Mar | In VIN 162;  
  • Group 1 Complete and Submit: *Ohm’s Law and Resistivity* |
| **8-Mar** 15-Mar | In VIN 162;  
  • Group 2 Complete and Submit: *Ohm’s Law and Resistivity* |
| **4-Mar** 22-Mar | In Blackboard:  
  • Complete and Submit: *RC Circuit* |
| **22-Mar** 29-Mar | In VIN 162;  
  • Group 1 Complete and Submit: *Kirchhoff’s Law* |
| **29-Mar** 5-Apr | In VIN 162;  
  • Group 2 Complete and Submit: *Kirchhoff’s Law* |
| **5-Apr** 12-Apr | In Blackboard:  
  • Complete and Submit: *Magnetic Field from a Wire* |
| **12-Apr** 19-Apr | In VIN 162;  
  • Group 1 Complete and Submit: *Practicum* |
| **19-Apr** 26-Apr | In VIN 162;  
  • Group 2 Complete and Submit: *Practicum* |
| **26-Apr** | No Lab |
| 3-May | No Lab |
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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<tbody>
<tr>
<td>Prelab Quizzes</td>
<td>20%</td>
</tr>
<tr>
<td>Laboratory Grade Average</td>
<td>60%</td>
</tr>
<tr>
<td>Laboratory Practicum</td>
<td>20%</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.

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.

Pre-labs count for 25% of each lab score, lab reports count for 75% of each lab score. 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 the ASU Lab Safety Quiz 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
- 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.\textsuperscript{5}

**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.\textsuperscript{6} 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\textsuperscript{7} 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.\footnote{9}

**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\footnote{10} 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

You may also file a report online\footnote{11} 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.\footnote{12}
Required Use of Masks/Facial Coverings by Students

As a member of the Texas Tech University System, Angelo State University has adopted the mandatory [Facial Covering Policy](http://www.texastech.edu/downloads/ttus-policy-face-coverings.pdf) to ensure a safe and healthy classroom experience. Current research on the COVID-19 virus suggests there is a significant reduction in the potential for transmission of the virus from person to person by wearing a mask/facial covering that covers the nose and mouth areas. Therefore, in compliance with the university policy students in this class are required to wear a mask/facial covering before, during, and after class. Faculty members may also ask you to display your daily screening badge as a prerequisite to enter the classroom. You are also asked to maintain safe distancing practices to the best of your ability. For the safety of everyone, any student not appropriately wearing a mask/facial covering will be asked to leave the classroom immediately. The student will be responsible to make up any missed class content or work. Continued non-compliance with the Texas Tech University System Policy may result in disciplinary action through the Office of Student Conduct.

Modifications to the Syllabus

This syllabus, including grade evaluation and course schedule, is subject to modification. In particular, the COVID-19 pandemic may require significant changes in course delivery and content on potentially short notice.

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1. [https://angelo.blackboard.com/](https://angelo.blackboard.com/)
3. [https://www.angelo.edu/current-students/student-handbook/](https://www.angelo.edu/current-students/student-handbook/)
4. [https://www.angelo.edu/academics/catalog/](https://www.angelo.edu/academics/catalog/)
6. [https://www.angelo.edu/current-students/disability-services/](https://www.angelo.edu/current-students/disability-services/)
7. [https://www.angelo.edu/content/files/14197-op-1011-grading-procedures](https://www.angelo.edu/content/files/14197-op-1011-grading-procedures)
9. [https://www.angelo.edu/current-students/writing-center/academic_honesty.php](https://www.angelo.edu/current-students/writing-center/academic_honesty.php)
10. [https://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of](https://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of)
11. [http://www.angelo.edu/incident-form](http://www.angelo.edu/incident-form)
12. [https://www.angelo.edu/title-ix](https://www.angelo.edu/title-ix)