Physics 2425
Fundamentals of Physics I

Spring 2019

Course Information

Meeting Place & Time
VIN 158
MWF 09:00-09:50 AM

Instructor
Dr. Kenneth Carrell
Office: VIN 119
Phone: (325) 942-2136
Email: kenneth.carrell@angelo.edu
Office Hours: MR 1-2 PM, M-F 11am-12pm (by appointment)

Course Description

Physics 2425, Fundamentals of Physics I, is a three credit hour introductory study of the fundamental principles of physics. Topics covered will include one and two dimensional motion, periodic motion, momentum and energy, waves, and basic thermodynamics.
Required Materials

There is no specific required textbook for this course – any calculus-based physics text will work. There are freely available physics textbooks online from OpenStax and in the Course Materials folder of the course Blackboard page. If you prefer a hard copy of a text you can look for older editions of texts such as Halliday, Serway, etc.

General Course Goals

Upon completion of this course, the student will

1. gain factual knowledge in the area of physics,
2. learn fundamental principles of physics, and
3. apply course material to solve physical problems.

Academic Integrity

Angelo State University expects its students to maintain complete honesty and integrity in their academic pursuits. Students are responsible for understanding and complying with the university Academic Honor Code and the ASU Student Handbook.

Accommodations for Disabilities

The Student Life Office is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability, and it is the student’s responsibility to initiate such a request by contacting the Student Life Office. The Student Life Office will establish the particular documentation requirements necessary for the various types of disabilities.

Religious Holidays

A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. A student who fails to do class work for the observance of a religious holy day shall be allowed to take an examination or complete an assignment scheduled for that day within a reasonable time after the absence.
Course Administration

Class Attendance

- Class attendance is both an ASU and course requirement.
- You are expected to attend all scheduled class meetings.
- You are responsible for all course material and information that is presented in class.
- Attendance will be taken for each class meeting.
- Students will complete and return in-class quizzes and/or initial the sign-in sheet for each class attended.
- If you miss class, get the class notes and information from a fellow student.
- Attendance (or lack thereof) often makes a difference in your success in this class.
- ANY STUDENT CAUGHT SIGNING IN FOR ANOTHER STUDENT WILL RESULT IN ALL PARTIES BEING DROPPED 1 (ONE) LETTER GRADE.

Late Work

- Unexcused late work or missed tests will not be accepted.
- If your assignments are not submitted by the posted deadline, you will receive a zero for that assignment.
- You must contact your professor before the assignment is due if you believe it will be late or as soon as possible after the due date in the case of an unexpected emergency.

Assessing Outcomes & Grade Determination

Method of Assessing Outcomes
Student learning outcomes will be assessed with:

- Quizzes/Homework Assignments (25%) will be given throughout the semester, both in class and on Blackboard. Assignments and due dates will be announced in class.
- Laboratory (25%) work will be completed at a different scheduled time.
- Three midterm exams (30%) will be given throughout the semester with due dates listed below in the Course Outline.
- A comprehensive Final Exam (20%) on May 8.
NOTE: Blackboard issues **will** arise, if you wait until the last minute to complete assignments you run the risk of missing them. I can fix problems such as browser crashes and internet outages, but **NOT** the hour before it is due. You have multiple days to complete work, so **due dates are firm.**

**Grade Determination**
Your final grade will be determined by your scores on all tests and exams.

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Quizzes/Homework</td>
<td>25%</td>
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<tr>
<td>Laboratory</td>
<td>25%</td>
</tr>
<tr>
<td>Midterm Exams</td>
<td>30%</td>
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<tr>
<td>Final Exam</td>
<td>20%</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100%</strong></td>
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Angelo State University employs a letter grade system. Grades in this course are determined on a percentage scale:

- **A** = 90-100%
- **B** = 80-89%
- **C** = 70-79%
- **D** = 60-69%
- **F** = 59% and below

**Final course grades will also be determined in part based on attendance as follows:**

<table>
<thead>
<tr>
<th>Number of Absences</th>
<th>Highest Grade Possible</th>
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<tbody>
<tr>
<td>0-6</td>
<td>A</td>
</tr>
<tr>
<td>7-10</td>
<td>B</td>
</tr>
<tr>
<td>11-14</td>
<td>C</td>
</tr>
<tr>
<td>15-19</td>
<td>D</td>
</tr>
<tr>
<td>20+</td>
<td>F</td>
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Rough Course Outline
*Subject to change.

**WEEK 1 (January 14 – 18):**
Introduction & One Dimensional Motion

**WEEK 2 (January 22 – 25):**
One Dimensional Motion & Energy

**WEEK 3 (January 28 – February 1):**
Potential Energy & Forces

**WEEK 4 (February 4 – 8):**
*Midterm Exam #1 on February 4th*
Work & Power

**WEEK 5 (February 11 – 15):**
Work, Power, Momentum & Newton’s Laws

**WEEK 6 (February 18 – 22):**
Newton’s Laws & Vectors

**WEEK 7 (February 25 – March 1):**
Vector & Two Dimensional Motion

**WEEK 8 (March 4 – 8):**
Two Dimensional Motion
*Midterm Exam #2 on March 8 (???)*

**SPRING BREAK: March 11 – 15**

**WEEK 9 (March 18 – 22):**
*Midterm Exam #2 on March 18 (???)*
Circular Motion

**WEEK 10 (March 25 – 29):**
Circular Motion & Harmonic Motion

**WEEK 11 (April 1 – 5):**
Harmonic Motion
WEEK 12 (April 8 – 12):
Waves & Sound

WEEK 13 (April 15 – 19):
Midterm Exam #3 on April 15
Temperature, Heat & Gases

WEEK 14 (April 22 – 26):
Temperature, Heat, & Gases

WEEK 15 (April 29 – May 3):
Thermodynamics

FINAL EXAM is Wednesday May 8 from 8:00-10:00am