

**Physics 2125 - Lab
University Physics I**

**Western Texas College
2021**

- I. Basic Course Information
 - A. Course Description: Basic laboratory experiments supporting theoretical principles presented in lecture involving the principles and applications of classical mechanics, including harmonic motion and physical systems; experimental design, data collection and analysis, and preparation of laboratory reports.
 - B. Any required prerequisites: Students must make a C or better in Math 2413 (Calculus I).
 - C. Online course content is administered through the college's learning management system (LMS), Moodle, also called eCampus. A link to eCampus can be found on my.wtc.edu and to Moodle (the big M with a graduation cap) on the college's home page, www.wtc.edu.
- II. Student Learning Outcomes
 - 1) Prepare laboratory reports that clearly communicate experimental information in a logical and scientific manner.
 - 2) Conduct basic laboratory experiments involving classical mechanics.
 - 3) Relate physical observations and measurements involving classical mechanics to theoretical principles.
 - 4) Evaluate the accuracy of physical measurements and the potential sources of error in the measurements.
 - 5) Design fundamental experiments involving principles of classical mechanics.
 - 6) Identify appropriate sources of information for conducting laboratory experiments involving classical mechanics.
- III. Testing Requirements – **Online Students Only**
 - A. The lab final exam must be proctored by an approved testing organization. (Ask your instructor for more details.)
 - B. Students are allowed to use their book, notes and calculator while testing. Students are NOT allowed to use cell phones or access the internet during the exam.
- IV. Major Course Requirements
 - A. There will be 9 labs.
 - B. There will be a proctored lab final exam.
- V. Grading System
 - A. See the First Day Handout for the percentages of the average in this course and the letter grade breakdown for the final grade.
- VI. Information on Books and Other Course Materials
 - A. **LabPaq kit REQUIRED for all students: Kit SKU: LP-2232-PK-02.** Contact the WTC Bookstore.
 - B. Calculators: Required.

- VI. Other Policies, Procedures and important dates. Click this link <http://www.wtc.edu/publications.html> then on the appropriate catalog to find the following information.
- A. Campus Calendar
 - B. Final exam schedule
 - C. How to drop a class
 - D. Withdrawal information
 - E. Student Conduct/Academic Integrity
 - F. Class Attendance
 - G. Students with disabilities
- VII. Topics for this lab course.
- 1: Measurements + Error
 - 2: Kinematics
 - 3: Air Resistance
 - 4: Newton's Laws
 - 5: Hooke's Law
 - 6: Torque and Equilibrium
 - 7: Centripetal Acceleration
 - 8: Simple Harmonic Motion
 - 9: Specific Heats

Modified 11/13/20