

**Syllabus**  
**Physics 2126**  
**University Physics II – Lab**

**Western Texas College**

- I. Basic Course Information
  - A. Course Description: Laboratory experiments supporting theoretical principles covered involving the principles of electricity and magnetism, including circuits, electromagnetism, waves, sound, light, and optics; experimental design, data collection and analysis, and preparation of laboratory reports.
  - B. Any required prerequisites: Students must make a C or better in Physics 2425 (University Physics I) and Math 2414 (Calculus II).
  - 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](http://my.wtc.edu) and to Moodle (the big M with a graduation cap) on the college's home page, [www.wtc.edu](http://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 electricity and magnetism.
  - 3) Relate physical observations and measurements involving electricity and magnetism 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 electricity and magnetism.
  - 6) Identify appropriate sources of information for conducting laboratory experiments involving electricity and magnetism.
- 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).
  - A. 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 8 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-2236-PK-02.** Contact the WTC Bookstore.
  - B. Calculators: Required.

VII. 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

VIII. Topics for this course

Labs

- 1. Static Electricity or Electrostatics
- 2. Electric Fields
- 3. Capacitance in a Circuit
- 4. Resistors in Series and Parallel
- 5. Introduction to Electrical Circuits-Ohm's Law
- 6. Electric Motor
- 7. Reflection and Refraction
- 8. Diffraction Grating

Modified 10/21/20