

Physics 1401

Physics for Nonscience Majors Spring Semester 2008 Course Outline

Instructor: Thomas L. Gibson **Office:** Sc 27 **Office Hours:** 10:00-11:00 (M-F) (or by appointment)

Text: *Conceptual Physics*, 10th edition, by Paul G. Hewitt

Course Coverage: The course will cover topics from the eight sections in the text.

Web page: www.phys.ttu.edu/~ritlg/courses/p1401/index.html

Grading Policy:

The following six scores will be accumulated during the course of the semester:

Short Quizzes; Exam I; Exam II; Exam III; Final; Final.

The course grade will be the average of the Short Quizzes and your four highest exam scores. **NO MAKEUP EXAMS OR QUIZZES WILL BE GIVEN.** Your letter grade will be determined on the following scale:

(55-65) D; (66-81) C; (82-91) B; (92-100) A. I do use +/- grades one point either side of a grade boundary, e.g., grades of 80 or 81 earn a C⁺ while grades of 82 or 83 earn a B⁻.

Quizzes:

Short (unannounced, in-class) quizzes based on *assigned* reading, homework, online quizzes, and material covered in class will be given approximately once a week. If you take **all** of the online quizzes, at the end of the semester you may replace your two lowest in-class quiz grades with the average of the highest value for each of your online quizzes.

Your Lab Score will be entered in the short quiz category and count as four in-class quizzes. Since this is a lab-credit course, you must obtain a laboratory score of 55% or better for the current semester in order to pass the entire (Physics 1401) course.

Hour Exams: Three one-hour exams will be given.

Final: A *comprehensive* final exam will be given.

Important Dates:

January 9 = Wednesday---First day of class.

January 21 = Monday---Martin Luther King, Jr. day. University holiday.

March 12 = Wednesday---Last day to drop a class.

March 15-23 = Saturday-Sunday---Spring Break.

March 24 = Monday---Day of no classes.

March 25 = Tuesday---Classes resume.

April 29 = Tuesday---Last day of classes.

May 3 = Saturday---**Final Exam** (7:30 a.m. to 10:00 a.m.)

Approximate Dates for One-hour Exams:

- Exam 1: February 8, 2008.
- Exam 2: March 7, 2008.
- Exam 3: April 11, 2008.

Important Notes:

Any student who, because of a disability, may require special arrangements in order to meet the course requirements should contact the instructor as soon as possible to make any necessary arrangements. Students should present appropriate verification from Student Disability Services during the instructor's office hours. Please note instructors are not allowed to provide classroom accommodations to a student until appropriate verification from Student Disability Services has been provided. For additional information, you may contact the Student Disability Services office at 335 West Hall or 806-742-2405.

The faculty is strongly committed to upholding standards of academic integrity. These standards, at the minimum, require that students **never present the work of others as their own and never take unfair advantage** of any other member of the Texas Tech community. Further, rude, disruptive, or disrespectful behavior has no place in the classroom and will not be tolerated.

Course Goals:

This course is intended to acquaint students with the basic laws of physics and to develop a better understanding of physical science in general. To this end, we will emphasize concepts over mathematical manipulation and student participation over more traditional lecture. The laboratory portion of this course, Physics 1401 Laboratory, is an important component of developing "hands on" understanding of the material that we will cover in the lecture portion. The combination of Physics 1401 with its associated laboratory course counts toward fulfillment of the natural science requirement in Arts and Sciences.

Expected Learning Outcomes

Upon successful completion of this course, students will be able to:

1. Describe the basis of the scientific method.
2. Distinguish between a scientific theory and speculation.
3. Explain at a conceptual level the fundamental elements of energy, motion, and thermodynamics.

Methods for Assessing the Expected Learning Outcomes

The expected learning outcomes for the course will be assessed through:

Non-Graded Concept Quizzes, Guided Classroom Discussion, Graded Quizzes, Laboratory Exercises and Reports, Online Quizzes, and Multiple-Format Exams.

Strategy for Success:

- Be prepared! Study your notes, read the material in the text *before* we cover it in class.
- Take the online quizzes. These will help you keep up, will make for more productive classroom interaction, and will help keep you prepared for those unannounced quizzes that make up 10% of your final grade. It is your responsibility to make sure that your online quizzes are being properly recorded.
- Begin all homework assignments as soon as possible. The assignments take time and thought.
- Once you can work through a problem with your notes, book, study group, etc., write the question down on a blank sheet of paper and then try to rework it entirely on your own a few days later.
- Never wait until the night before a test to "begin" studying.
- See your instructor if you are stuck--that's why they pay me the big bucks!
- Check out the web pages for important announcements, information, and FAQS.

Physics 1401 Laboratory

Physics for Nonscience Majors Laboratory

Spring Semester 2008 Course Outline

Lab Coordinator: Thomas L. Gibson **Office:** Sc 27 **Office Hours:** 10:00-11:00 (M-F)

Instructor: (To be announced). **Office Hours:** (To be announced).

Text: *Laboratory Manual for Physics 1401---Experimental Elementary Physics*

Web page: www.phys.ttu.edu/~ritlg/courses/p1101/index.html

This lab is designed to acquaint the student with the fundamentals of physics through hands-on and minds-on activities. The emphasis will be on experiencing and understanding concepts. It is also the goal of this course to make use of inexpensive, easily available materials so that any of the students---especially those who might become teachers---can make use of what they are learning to teach others.

Please be careful with our equipment---it may be inexpensive, but it was not free. You will be held responsible for any damage that you cause. There is absolutely **NO FOOD OR DRINK ALLOWED IN THE LABORATORY**---violators will be held in low esteem. Attendance is important since there will be no makeup labs.

Scores for individual labs are assigned by the lab instructor and will be based on the laboratory reports, which are always due at the beginning of the next lab meeting, as well as any quizzes which are given at the discretion of the instructor. Your lab score will reflect the following scale:

(55-65) D; (66-81) C; (82-91) B; (92-100) A, with +/- grades 1 point either side of a grade boundary and will be counted as four in-class quizzes. Since Physics 1401 is a laboratory course, *you must pass the lab portion with an average score of 55 or better* in order to receive a passing grade for the Physics 1401 course.

Important Notes:

- Any student who, because of a disability, may require special arrangements in order to meet the course requirements should contact the instructor as soon as possible to make any necessary arrangements. Students should present appropriate verification from Student Disability Services during the instructor's office hours. Please note instructors are not allowed to provide classroom accommodations to a student until appropriate verification from Student Disability Services has been provided. For additional information, you may contact the Student Disability Services office at 335 West Hall or 806-742-2405.
- The faculty is strongly committed to upholding standards of academic integrity. These standards, at the minimum, require that students never present the work of others as their own.
- Check the important announcements page before class each week.