Physics 1401

Physics for Nonscience Majors
Spring Semester 2013
Course Outline

Instructor: Thomas L. Gibson **Office:** Sc 27 **Office Hours:** 1:30-3:00 p.m. T,Th or 10:00-11:00 a.m. M,W (or by appointment)
Required Texts: *Conceptual Physics,* 11th edition, by Paul G. Hewitt with MasteringPhysics online homework license and *Physics 1401 Laboratory Manual*
Course Coverage: The course will cover topics from the eight sections in the text by Hewitt.
Web page: www.phys.ttu.edu/~ritlg/courses/p1401/index.html

This course satisfies part of the Natural Science core curriculum requirement. The objective of the study of the natural sciences component of a core curriculum is to enable the student to understand, construct, and evaluate relationships in the natural sciences, and to enable the student to understand the bases for building and testing theories. The natural sciences investigate the phenomena of the physical world.

Course Purpose:

Students graduating from Texas Tech University should be able to explain some of the major concepts in the natural sciences and demonstrate an understanding of scientific approaches to problem solving, including ethics.

Expected Learning Outcomes

Learning Outcome	Assessment
Distinguish between a scientific theory and speculation.	Beginning of the semester pretest and an end of the semester posttest.
Understand at a conceptual level the fundamental elements of energy, motion, and thermodynamics.	Beginning of the semester pretest and an end of the semester posttest.
Verify the importance of measurement to the scientific method.	Evaluation of measured data and conclusions from laboratory exercises.

Grading Policy:

The following six scores will be accumulated during the course of the semester:
OHLQ; Exam 1; Exam 2; Exam 3; Final Exam; Final Exam.
The course grade will be the average of the OHLQ (20%) and the four highest exam scores (20% each) of the five exam scores listed above. **NO MAKEUP EXAMS 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^-.

OHLQ:(Average of *Online Homework* + *Laboratory* + *Online Quizzes*)

Online homework (course ID MPGIBSONP1401S2013) from the Mastering Physics website will be assigned and graded on a regular basis. This will constitute half of the credit for the OHLQ category.

Laboratories will be conducted during the assigned lab periods. Your laboratory grade will constitute the other half of the credit for the OHLQ category. Since this is a lab-credit course, you must pass the lab in order to pass the course.

Finally, if you take **all** of the online quizzes and achieve a final average ≥ 92 before the due date (11:00 p.m. May 09, 2013), at the end of the semester you will receive 10 **bonus** points in your OHLQ category. *No other extra credit or bounus points* are available.

Hour Exams: Three one-hour exams will be given. **You will need a scantron sheet for each exam.**
Final: A *comprehensive* final exam will be given. **You will also need a scantron sheet for the final exam.**
Important Dates:

January 16 = Wednesday---Classes start for the Spring 2013 Semester.
January 21 = Monday---Martin Luther King Jr. Day.
March 27 = Wednesday---Last day to drop course.
March 09-17 = Saturday-Sunday---Spring Vacation.
April 01 = Monday---Day of no classes.
May 07 = Tuesday---Last day of classes.
May 10 = Friday---**Final Exam (Chapters 1-18,33,34)** (01:30-04:00 p.m.) in SC010 unless we are notified otherwise.

Approximate Dates for One-hour Exams:

- Friday, February 15, 2013.
- Friday, March 08, 2013.
- Friday, April 19, 2013.

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 in 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. 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.

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.

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