PHY303L Engineering Physics II - Honors, Spring 2001

Unique Number: 56280

Class - Meets MWF 9-9:50 in PAI 4.42

Instructor - Professor Greg O. Sitz
phone - 471-0701
email - GSITZ@PHYSICS.UTEXAS.EDU
office - RLM 10.313
office hours: Wednesday 10:30-11:30, Tuesday 5-6, or by appointment.

Teaching Assistant - Kathryn Fuchss
email - KNFUCHSS@MAIL.UTEXAS.EDU
Contact hours TBA.

Text - Physics for Scientist and Engineers with Modern Physics, Volume 2, by Serway and Beichner. We will cover chapters 23-32 and 34-38.

Grading - The breakdown is: Regular Classwork 30%, In-class exams (3): 35%, Final Exam 35%.

Regular Classwork -

- Two thirds of the assigned homework will be posted on the Web based Homework Service by Friday each week, and will be due at the time indicated on the Homework Service (typically 7 days later). All students are required to use the Service to submit homework solutions. Homework Service assignments will be augmented by with written assignments which will be hand graded and will count for one third of homework. Altogether, the homework will account for 25% of your total grade. You are encouraged to discuss homework with anyone you wish; however, all homework submissions must be prepared independently (by you).

- Concept quizzes will be short, 1 question quizzes given intermittently during most classes. They will not be graded, but will be used to evaluate attendance. If you complete 80-89% of the CQ’s, you will receive a bonus of 3% on your total score. If you complete 90+ % of the CQ’s, you will receive a bonus of 5% on your total score.

- Reading quizzes will be 5 minute, 1 question quizzes over reading assigned from the text. This will typically be the first 3 sections of a new chapter, and the quiz will take place the first day a new chapter is covered in class. Unless an announcement is made in class, new chapters will be covered according the attached syllabus. Together the RQ’s will count 5% of your total grade.
**Exams** - Three in-class exams, tentative dates: February 21, March 28 and May 2, plus a comprehensive final. The final is required. It is scheduled for Sat. May 12, 2-5 PM. If you are absent from a examination for the observance of a religious holy day you may complete the work missed within a reasonable time after the absence, if proper notice has been given. Notice must be given at least seven days prior to the exam.

**Other**: The last date to drop the course without possible academic penalty is February 11, 2001. The last day to drop the course for academic reasons is March 25, 2001.

Please notify me of any modification/adaptation you may require to accommodate a disability-related need. You will be requested to provide documentation to the Dean of Students’ Office, in order that the most appropriate accommodations can be determined. Specialized services are available on campus through Services for Students with Disabilities.

**Laboratory**: PHY103N is a distinct class, with a separate grade, however it is a co-requisite for this course.

**Alternatives**: This document (as well as other course related material) is (will be) available at:

http://www.ph.utexas.edu/~gositz/phy303.html

The Homework Service homepage is at (instructions are available at this site):

http://www.hw.utexas.edu

The page for adding yourself to the homework roster is:

http://www.hw.utexas.edu/roster.html
Syllabus

Week of January 15: Ch. 23, Electric Fields
January 22: Ch. 23 and Ch. 24, Gauss’s Law
January 29: Ch. 25 Electric Potential
February 5: Ch. 26 Capacitance
February 12: Ch. 27 Current and resistance
February 19: Ch. 28 DC Circuits and Test 1
February 26: Ch. 29 Magnetic Fields
March 5: Ch. 30 Sources of magnetic field
March 12: Spring Break
March 19: Ch. 31 Fraaday’s law
March 26: Ch. 32 Inductance and Test 2
April 2: Ch. 34 EM waves
April 9: Ch. 35 The nature of light
April 16: Ch. 36 Geometric Optics
April 23: Ch. 37 Interference
April 30: Ch. 38 Diffraction and Test 3

Quotes

“You do not know anything until you have practiced” - R. P. Feynman

“90% of success is just showing up” - Woody Hayes

“What led me more or less directly to the special theory of relativity was the conviction that the electromotive force acting on a body in motion in a magnetic field was nothing else but an electric field” - Albert Einstein (1952)

“This grand book, the universe... cannot be understood unless one first learns to comprehend the language and read the letters in which it is composed. It is written in the language of mathematics” - Galileo Galilei

“How often have I said to you that when you have eliminated the impossible, whatever remains, however improbable, must be the truth?” - Sherlock Holmes (Sir Arthur Conan Doyle)