

PHY303L Engineering Physics II - Honors, Spring 2009

Class - Unique Number: 58355 Meets MWF 9-9:50 in PAI 4.42

Instructor - Professor Greg O. Sitz

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office hours: Wednesday 10:30-11:30, Tuesday 4:30-5:30, or by appointment.

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Peer Assistant - Trey Suntrup

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Text - *Physics for Engineers and Scientists*, Volume 2, by *Ohanian and Markert*. We will cover chapters 23-35.

Grade Points: Grade points are assigned for **Homework, Reading Quizzes, In-class Exams,** and the **Final Exam**. There will be a total of 100 grade points possible during the semester; your semester grade will be computed based on the following cutoffs:

greater than 85 points = A

greater than 70 but less than 85 = B

greater than 60 but less than 70 = C

greater than 50 but less than 60 = D

less than 50 of the available points = F

Regular Classwork -

- **Homework:** will be distributed and due approximately weekly and will count for 20 grade points. You are encouraged to discuss homework with anyone you wish; however, all written homework must be prepared independently (by you). Homework is due at the end of class on the specified day. Homework that is between 1 minute and 1 week late will be accepted with a 50% penalty. Homework later than this will not be accepted.
- **Concept quizzes and attendance:** Concept quizzes will be short, 1 or 2 question quizzes given intermittently during most classes. They will not be graded, but will be used to evaluate attendance. If you miss no more than two of the CQ's preceding each in-class exam, you will receive a bonus of 5% on your score for that exam. If you miss no more than five of the CQ's for the entire semester, you will receive a bonus of 5% on your score for the final exam.
- **Reading quizzes:** will be 5 minute quizzes over reading assigned from the text. These will be given the first day a new chapter is covered in class, and will be announced the previous class. New chapters will be covered approximately according the attached syllabus. Together the RQ's will count 5 grade points.

Hour Exams: Three in-class exams will be given, tentative dates: Wednesday February 25, Friday April 3 and Wednesday May 6. Together the in-class exams will count for 45 grade points. The exams will consist of a mix of conceptual short answer and longer problems. Sample sheets that are representative of the conceptual questions will be distributed periodically to help you prepare.

Final Exam - The final is required. It is scheduled for Tuesday, May 19, 9:00 to 12:00 noon. It will be a comprehensive exam similar in format to the hour exams and will count for 30 grade points. It is **required** to pass the course.

Unless a *substantial* illness or family emergency is documented with a note from a physician or the dean's office, no make-up exams will be given. Any potential absences must be discussed with Dr. Sitz *prior* to the exam in order to have a make-up. Make-up exams will be oral and taken within 72 hrs. of the missed exam.

Other: The last date to drop the course without possible academic penalty is Monday February 16, 2009. The last day to drop the course for academic reasons is Monday March 30, 2009.

Please notify the instructors 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> and on the BlackBoard web site.

Syllabus

Week of January 19:	Ch. 22, Electric Force
January 26:	Ch. 23 and Ch. 24, Electric Fields and Gauss's Law
February 2:	Ch. 25 Electric Potential
February 9:	Ch. 26 Capacitance
February 16:	Ch. 27 Current and resistance
February 23:	Ch. 28 DC Circuits and Test 1
March 2:	Ch. 29 Magnetic Fields
March 9:	Ch. 30 Sources of magnetic field
March 16:	Spring Break
March 23:	Ch. 31 Induction
March 30:	Ch. 32 AC Circuits and Test 2
April 6:	Ch. 33 EM waves
April 13:	Ch. 34 Optics
April 20:	Ch. 34 Geometric Optics
April 27:	Ch. 35 Interference
May 4:	Ch. 35 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 Authur Conan Doyle)