Introduction to Electricity and Magnetism
PHYS 1304 (Spring 2007) Syllabus
http://www.physics.smu.edu/~kehoe/1304_S07

Instructor: Professor Bob Kehoe   **Office:**   Fondren Science 113
e-mail: kehoe@physics.smu.edu   **Phone:**   (214) 768-1793
                                        Fax: (214) 768-4095

Texts: *"Physics for Scientists and Engineers"*, Vol 2, 6th edition,
        Authors: Serway & Jewett
Prerequisite: facility with algebra and trigonometry, use of calculus
Class Time: Tues. & Thurs.   11:00a.m – 12:20p.m.
Classroom: Rm 123 Fondren Science
Office hours: 12:30pm-2:30pm Tuesday, or by appointment

Course Objectives: To provide an overview of electromagnetism. Students will familiarize themselves with electrical, magnetic and optical phenomena. They will also study important electronics concepts. Modern applications will be discussed. Problem solving skill development will also be an emphasis of the class.

Method of Instruction: The class will consist primarily of lectures. Help sessions will be Monday's 5:30pm to 8pm in Fondren 20 (same as lab room) and conducted by Rozmin Daya. Homework is the foundation of your effort to acquire skill in using the material in the course. It will be due on each Tuesday following the week the material is covered and will be worth 5% of the course grade. No late homework is accepted. Solutions will be posted on the course web-site.

Quizzes and Tests: There will be 3 primary tests during the semester, aside from the final exam. Tests will make up 45% of the class grade: 15% each for the exams. Each test covers material since the previous one. The final is cumulative over the whole course and counts for 25% of the grade. There will be weekly 20 minute quizzes during the semester scheduled at the start of each non-test week. These will provide a total of 25% of your grade. The lowest two quiz grades will be dropped. Each quiz covers material since the last test or quiz. Tests and quizzes are closed book. You may bring a single 8.5"x11" sheet with important formulas and constants relevant for the material on each test and quiz.

Grading and Attendance Policy: In general, it is **crucial** to show your work to get credit for solutions to quiz or test problems. Regrading requests must be well-justified in writing, and as delineated on the course web-page. Anticipated absences resulting from religious observance or officially sanctioned extracurricular activity must be brought to the instructor's attention at least 2 weeks in advance. Affected quizzes or tests will be given prior to the rest of the class. No other make-up quizzes or tests will be granted.

Physics 1304 Schedule, Spring 2007

Date	Reading, Tests, Quizzes	Homework Problems Assigned:
Jan 16 T	Ch 23: Electric Fields	**7**, 8, 9, 14, **15**, 20, 30, 35, 42
Jan 23 T	Ch 24: Gauss's Law Quiz #1	1,4,**10**,11,19,23,28,34,35
Jan 30 T	Ch 25: Electric Potential Quiz #2	3,**6**,**18**,22,37,38,45,48
Feb 6 T	Ch 26: Capacitance Ch 27: Current and Resistance	1,2,7,**16**,17,21,23,34 6,13,14,17,**21**,22,24
Feb 13 T	Test #1 (Ch 23-26) Ch 28: Direct Current Circuits	 1,6,11,15,**21**,25,29,31,33,**36**
Feb 20 T	Ch 29: Magnetic Fields Ch 30: Magnetic Field Sources HW27&28 due; Quiz #3	1,**3**,8,**11**,13,21 1,7,16,**23**
Feb 27 T	Ch 31: Faraday's Law Ch 32: Inductance HW29&30 due; Quiz #4	1, 3, 5, 10,13,20 1,12,15,29,**48**,51
Mar 6 T	HW31&32 due; Test #2 (Ch 27-32) Ch 33: Alternating Currents	 **2**,6,**8**,14,15,20,21,26,44
Mar 13 T	* no class (Spring Break)	
Mar 20 T	Ch 34: Electromagnetic Waves HW33 due; Quiz #5	2,3,5,**11**,15,26,59
Mar 27 T	Ch 35: Optics HW34 due; Quiz #6	8,**10**,12,13,21,25,**36**
Apr 3 T	Ch 36: Geometric Optics HW35 due; Quiz #7	3,**7**,11,21,28,30,**33**
Apr 4 W	*last drop date	
Apr 10 T	HW36 due; Test #3 (Ch 33-36) Ch 37: Interference	 1,2,7,30,32,37
Apr 17 T	Ch 38: Diffraction, Polarization HW37 due; Quiz #8	4,11,20
Apr 24 T	Ch 40: Quantum Mechanics HW38 due; Quiz #9	Q:17-19, 21-23
May 1 T	HW40 due; last day of classes	
May 9 W	Final Exam 8am-11am	