

**PHYSICS 220B– Electricity and Magnetism**  
**Ticket 15837 –MWF 10:00-10:50 – Spring 2004**  
**(Lecture room SC 1124 )**

**Instructor:** Dr. Donna Sheng (Office hour: MW 8:30-9:45am, MF 1:30-3:00pm)  
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**Text book:** Physics for Scientists and Engineers, by Douglas C. Giancoli, 3<sup>rd</sup> edition (Prentice Hall, 2000).

**Objectives:**

- (1) To study the basis principles of electricity and magnetism;
- (2) To develop and improve problem-solving skills;
- (3) To understand applications of physics principles in daily life and modern technology.

**Topics covered:**

Chapters 21-31. Electricity, electric field, potential and energy, capacitance and dielectric materials, DC circuits, magnetic field, electromagnetic induction, and AC circuits.

This course fulfills the requirements of general education section B. 1 in the physical sciences by covering electric and magnetic field, circuit theory and electromagnetic induction.

**Exams, Quizzes, Grading:** There will be biweekly quizzes worth total 100 points. There will be two exams (mid term and final), each worth 50 points. The mid term exam will be on all of the topics covered prior to the exam. The final exam will be on the topics covered thereafter. The grade distribution will be as follows: A and A- :175-200, B+, B and B-:155-174, C+,C and C-: 120-154, D+,D,D-: 90-119, F 89 or less. In each range the lower values will be minus and the higher end plus.

**Homework:** Homework problems will be assigned but not collected. I will solve some example and homework problems during class time. Solutions to assigned homework will be available in the reserve room of the Oviatt Library (located in the second floor of the East Wing).

**Preparation:** (1)Reading the material of each chapter in advance will be very helpful to understanding the lectures. This can make a big difference in your test scores.  
(2) Work on the assigned homework problems, study the chapters covered in class and the solved example problems in the textbook as a preparation for the test.  
(3) You may get help from me of course and at the Supplement Instruction (Student Service Building) free of charge. Please check with the Physics Department Office, Room 1130 for more information.

