

PHYS 2523-001 – UNIVERSITY PHYSICS II(Spring, 2007)

Professor	Fa-chung (Fred) Wang	Office Hours	MWF. 11 AM to 1 PM, TR. 2 – 4 PM;
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CATALOG DESCRIPTION:

Credit 3 semester hours. A calculus based introduction to general physics with topics to include electricity, magnetism and selected topics from heat, waves and optics.

PREREQUISITE: Math 1124; Phys 2013, or 2513 or 2514.

TEXTBOOK: **PHYSICS** for Scientists & Engineers, by Douglas C. Giancoli, 3rd. ed. 2000 (Prentice Hall)

COURSE GOAL: To learn fundamental concepts in the fields of electricity & magnetism applicable to engineers & scientists.

COURSE OUTCOMES: Upon completion of this course, students should be able to demonstrate:

- facility with the concepts in the field of electromagnetism as measured by problem-solving skills.
- facility with scientific method & quantitative methods of thinking;
- ability to apply calculus in a real-world setting.

COURSE POLICIES:

This course uses the lecture format. Selected materials in each chapter will be covered in lecture. You should read the entire assigned chapter before class. The lecture will not replace reading the materials. The lecture will be to amplify and explain the materials in the textbook. Homework problems will be assigned during the entire semester for each chapter covered. It is expected that the student solves these problems prior to the next class meeting. Any student unable to solve a particular assigned problem(s) should participate in help sessions- recitation & tutorial. Pop quizzes may be given occasionally on covered materials. It is expected that you will need to spend at least two hours studying outside the class for each hour spent in class. This means you should plan to devote a minimum of nine hours per week for this class.

You should also be currently enrolled in Phys 2521 laboratory.

HOMEWORK AND GRADING:

There will be three regular examinations and a final. All examinations are closed book and non-comprehensive. The use of calculators is encouraged. Makeup examinations will be given ONLY for a university-approved absence verified in writing. The final exam. will contribute to about 38% of your final grade, and the other three regular exams will combine contribute about 50%. The remaining about 12% will come from attendance, quizzes and classroom performance.

The grading system is as follows: (80 – 100) A; (65 – 79) B; (50 – 64) C; (35 – 49) D; (0 – 34) F.

ORAL AND WRITTEN COMMUNICATIONS

Oral or written communication will be given through exams, classroom and individual discussion, and use of optional web-based materials.

ATTENDANCE POLICY:

Class will start and end at the prescribed times. Attendance at every class is expected and is each student's responsibility. Absence or tardiness may result in lowered grades. Excessive absenteeism, whether EXCUSED or UNEXCUSED, may result in a student's course grade being reduced or assignment of a grade of "F". Absences are accumulated beginning with the first day of class. The University Undergraduate Catalog (2002 – 2003, p.41) provides more detailed information.

Grading/Class Related Appeals: Refer to the University Undergraduate Catalog, (2002 –2003, p. 39)

COURSE OUTLINE

Week	Topic	Note
1 (Jan. 16- 20)	Ch. 21: Electric Charges & Fields Ch. 22: Gauss' Law	Late Registration and Drop/Add <u>Ends on Jan. 19 for Undergrad., & on Jan. 20 for Grad. Students</u>
2 (Jan. 22 – 26)	Ch. 22: (Continued) Ch. 23: Electric Potential	
3 (Jan. 29 – Feb 2)	Ch. 23: (continued) Quiz #1 over Ch. 21-23 Ch. 24: Capacitance, Dielectrics, Electric Energy storage	Jan. 31. Last Day to withdraw from course(s) without record. Feb. 1, Withdrew from courses with Record Begins. Quiz #1, Feb. 1.
4 (Feb. 5– 9)	Ch. 24: (Continued) Ch. 25: Electric Current & Resistance	
5 (Feb. 12 - 16)	Ch. 25: (Continued) Ch. 26: DC Circuits	
6 (Feb. 19 – 23)	Ch. 26 (continued) Exam. #1 over Ch. 24-26	Exam. #1, Feb. 22.
7 (Feb. 26 – Mar 2)	Ch. 27: Magnetism.	
8 (Mar. 5 - 9)	Ch. 27: (continued) Ch. 28: Sources of the Magnetic Fields	Week 9, Mar. 12 – 16, Spring Break. No classes
10 (Mar. 19 – 23)	Ch. 28: (Continued) Exam. #2 over Ch. 27-28	Exam. #2, Mar. 22.
11 (Mar. 26 - 30) 12 (Apr. 2 -- 6)	Ch. 29: Electromagnetic Induction & Faraday's Law Ch. 30: Inductance & Electromagnetic Oscillations.	Withdrew from classes with record "W" Ends Apr. 2.
13 (Apr. 9 – 13)	Exam. #3 over Ch. 29-30 Selected Topics: Waves	Exam. #3, Apr. 10.
14 (Apr. 16 – 20)	Selected Topics: Optics	
15 (Apr.23 – 27)	Optics (Continued)	
16 (Apr. 30 – May 4)	Review Days---M. T. Study Days-----W. Thur. Final Exams. May 4 (Fri.) – 9 (Wed.)	Final Exam. Fri.May 4,1:30 – 3:30 PM
17 (May 7– 11)	Final Exam. Period Continued	