

P135 Electricity & Magnetism F2011 Prerequisites: Phys 11C, Math 045, Math 105A

Instructor: Hossein Partovi Office: SEQ-430 Tel: 278-6501 email: hpartovi@csus.edu

web page: www.csus.edu/indiv/p/partovimh/ Office Hours: M (12-1), F(12:30-1:30), in SQU-430; W(1-2) in SQU-124

OBJECTIVE. The objective is to develop a conceptual understanding and a working knowledge of electromagnetism. The course starts with a review of vector calculus and ends with Maxwell's equations.

TEXTBOOK. The textbook for this course is Griffiths, *Introduction to Electrodynamics*, 3rd ed. There is a rich collection of books dealing with E&M at the central library and a pretty good one in the department collection (SQU-124). Here are two textbooks that you may find useful: Lorrain, Corson, and Lorrain, *Electromagnetic Phenomena*, and Jackson, *Electrodynamics* (advanced). In addition, your 11C level textbook (e.g., Halliday, Resnick, and Walker) should serve as a constant companion for basic E&M.

HOMEWORK. Homework is to be dropped in my drop box (2nd floor, SQU) by 4 PM on Fridays (except as noted). Late homework will count for no more than half credit if occasional (i.e., 1-2 times/semester) and will not be accepted otherwise. A fraction of each problem set will be selected and graded. As usual, working through the examples in the textbook and on the homework problems and thoroughly understanding them is a major component of the learning process. Do not use solution manuals or any other source of solutions to the homework problems. However, do not hesitate to ask HP or others questions about the homework, or study and work with friends or in groups. In fact **working with classmates in groups can be an effective learning experience and is encouraged. But it is absolutely essential, and fully expected, that what you write up and submit is your own, individual work.** Needless to say, copying solutions (from any source, as stated above), or letting your partner do the thinking while you do the writing, defeats the very purpose of homework and constitutes academic dishonesty. You will only receive credit for your own work, based on your learning and understanding. Quizzes will deal with material similar to homework and will thus provide a measure of your understanding of it.

GRADE. There will be three midterm exams and a final; these will count for 18%, 18%, 18%, and 30% respectively. Homework and quizzes will count for 16%.

ACADEMIC DISHONESTY. "The faculty of the Department of Physics and Astronomy will not tolerate academic dishonesty. Falsification of data, copying, unauthorized collaboration, plagiarism, alteration of graded materials, or other actions (as described in, but not necessarily limited to the University State Policy Manual) will be promptly reported to the Office of Student Affairs. The offending student will be penalized on the assignment in question. Serious infractions will result in course failure and a recommendation for administrative sanctions."

WEEK	CHAPTER	HOMEWORK
Aug 29-Sep 2	1	1.3,1.4,1.7,1.11(c), 1.13,1.15(c), 1.16,1.18(c), 1.19,1.21(b), 1.25(c,d),1.26,1.27
Sep 6-9	1, 2	1.28(a,c),1.29,1.30,1.31(a),1.33,1.43(b),1.44(a,d),1.45,1.47(a,b)
Sep 12-16	2	2 2.1,2.2,2.3,2.6,2.8,2.9,2.10
Sep 19-23	2	2.11,2.13,2.14,2.16,2.17,2.20,2.21 (HW due 9/22 @ 4 pm)
First Exam, Friday, 9/23/11		
Sep 26-30	2	2.24,2.25,2.27,2.29,2.30,2.31,2.32,2.33
Oct 3-7	2	2.35,2.36,2.38,2.39,2.40
Oct 10-14	3	3.1,3.2,3.3,3.6,3.8,3.10
Oct 17-21	3	3.12,3.14,3.17,3.18,3.21,3.26 (HW due 10/20 @ 4 pm)
Second Exam, Friday, 10/21/11		
Oct 24-28	4	3.31,3.32,3.38,4.1,4.2,4.9
Oct 31-Nov 4	4, 5	4.10,4.15,4.16,4.18,4.20,4.22
Nov 7-10	5	5.2,5.4,5.6,5.8,5.11,5.13 (HW due 11/10 @ 4 pm)
Nov 14-18	5, 6	5.17,5.22,5.25,5.34,5.37 (HW due 11/17 @ 4 pm)
Third Exam, Friday, 11/18/11		
Nov 21-23	6	6.3,6.7,6.8,6.17,6.18 (HW due 11/23 @ 4 pm)
Nov 28-Dec 2	7	7.1,7.3,7.7,7.15,7.18,7.20
Dec 5-9	7	7.26,7.28,7.29,7.31,7.36,7.37

Final Exam: Friday, December 16th, 8:00-10:00 AM