

**PHY6346, Electromagnetic Theory I (Fall 2015)**

**Instructor:** Dr. Inna Ponomareva; Office: ISA 5103; E-mail: iponomar@usf.edu; telephone: 974-7286

Text: Classical Electrodynamics , 3<sup>rd</sup> ed; Publisher: Wiley; Author: J.D. Jackson

Class: MW 3:30pm-4:45pm ISA 4010

Office Hours: MW 2:00pm-3:00pm and by appointment.

**Course Outline and Objectives**

The course targets fundamental principles of classical electrodynamics. The focus is electro- and magnetostatics. It requires understanding of the basic principles of electromagnetism. The topics of the course include introduction to electrostatics and magnetostatics, boundary value problems, electro- and magneto-statics of maroscopic media. The main ideas are understood and re-enforced by developing conceptual knowledge and problem-solving skills. Problems will be assigned from each chapter of the text. In addition, conceptual questions will be offered.

After we complete each chapter in the text, I will collect the homework and check it for completeness. Occasionally some of the problems may be graded. The homework will be due at the beginning of the first lecture of the next chapter. In addition, there will be a quiz after each chapter that emphasizes basic concepts of the material learned. I will give exact dates for these quizzes about one week in advance. In studying for the quizzes and examinations you are encouraged to work on problems in the book in addition to those assigned. Please read the text before each lecture. Although I will not require attendance, it is paramount that you come to every lecture in order to keep up with the work. Please come see me during office hours if you have missed a lecture to get 'up to speed' on the course work.

<b>Course Grading Breakout</b>	Homework Problems	10 %
	Quizzes	30 %
	Mid-term Exam	30 %
	Final	30 %

**Course Grading**

> 93	A
90 < 93	A-
87 < 90	B+
84 < 87	B
80 < 84	B-
77 < 80	C+
74 < 77	C
70 < 74	C-
67 < 70	D+
64 < 67	D
60 < 64	D-
< 60	F

## **Tentative Schedule and Examination Dates**

<u>Week Beginning</u>	<u>Topics (Chapters in Text)</u>
Aug 23	Introduction to Electrostatics (1)
Aug 30	
Sept 6	
Sept 13	Boundary-Value Problems in Electrostatics: I (2)
Sept 20	
Sept 27	
Oct 4	Mid-term on Chapters 1 & 2 + Ch.2 Quiz on Monday, Oct 5th Boundary-Value Problems in Electrostatics: II (3)
Oct 11	
Oct 18	
Oct 25	Electrostatics of Macroscopic Media (4)
Nov 1	
Nov 8	
Nov 15	Magnetostatics (5)
Nov 22	
Nov 29	
Dec 6	FINAL on Chapters 3, 4, 5 + Ch. 5 Quiz on Wednesday Dec 9th 12:30 PM – 2:30 PM

### **NOTE**

Students who anticipate being absent from exams due to a major religious observance must provide notice of the date(s) and event(s) to the instructor, in writing, by the second class meeting. Notes and Tapes are not permitted for purposes of sale.

Any student with a disability is encouraged to meet with me privately during the first week of class to discuss accommodations. Each student must bring a current Memorandum of Accommodations from the Office of Student Disability Services (974-4309, SVC1133) which is prerequisite for receiving accommodations. Accommodated examinations through the Office of Student Disability Services require at least two weeks notice.