Physics 212 – Physics for Science and Engineering II

Section 2, Fall 2008
101 Lewis Hall, Tuesdays and Thursdays, 11:00 – 12:15 PM

Prof. Mihai Bondarescu
Email: mihai@phy.olemiss.edu

NOTE: PHYS 222 (Lab Physics for Science & Engineering I) is a co-requisite for PHYS 212. If you are not enrolled in PHYS 222, you must register for it or you will be dropped from PHYS 212. If you have already successfully completed PHYS 222, let me know.

Office Hours:

Monday 3:00-4:00, 126 Lewis Hall
Wednesday 3:00-4:00, 126 Lewis Hall
My main office is Room 5, Kennon.
If you need to see me outside of office hours, please make an appointment.
I am glad to work with you over the phone. I will also answer email inquiries although I cannot guarantee a timely response.

Textbook:

Fundamentals of Physics, 8th Ed., Halliday, Resnick, and Walker We will cover Chapters 21-36.

Grading:

25 %	Final Exam
20 % each	2 Midterm Exams
20 % total	Quizzes (Most Thursdays – except Exam weeks) *Typically 1 to 3 problems. The lowest two quiz scores are not counted.*
12 % total	Homework Assignments (Bi-weekly) *The lowest two homework scores are not counted.*
3 %	Class Participation *Students will be called on in class. You should be ready to respond to simple questions on the lecture material. The questions are usually taken from the Checkpoints in each chapter of the textbook.*

The homework assignments will primarily be Web based, although hand-written problems may be assigned from time to time. The web based part will be completed through the WileyPLUS web site at the following URL:
http://edugen.wiley.com/edugen/class/cls54139/
Go to this web site and register. You are required to do this as the majority of our homework assignments will be web-based. When you purchased your textbook, you should have also gotten information on logging into the WileyPLUS system. (Wiley is the publisher of the textbook) Homework assignments will be posted on the Blackboard site in the afternoon on Tuesdays and Thursdays, and on the Wiley web site for the course. *Check both BLACKBOARD and WileyPLUS for assignments by 5pm day of class*.

You must have a WileyPLUS account in order to get a grade in this course.

Homework is due one week from the day it is assigned. The deadline for homework is the end of class for hand written problems and noon (12 PM) for web-based problems.

Note that **the total Quiz score is the same as a midterm exam**. I want to reward those students who work hard over the course of the semester and stay on top of the material.

The grading scale:

A: 100 – 87.5, B: 87.5 – 75.0, C: 75.0 – 62.5, D: 62.5 – 50.0 F<50.0

Learning Objectives:

After completing this course, the student should understand the role of forces, fields, and potentials in solving problems in electricity and magnetism. They should also understand the linkages between electricity and magnetism, and the principles underlying the generation of electromagnetic waves. The student should grasp the wave nature of light, and the role geometric optics plays in describing image formation. They should develop the skill to use general mathematical laws and logical reasoning to work complex physical problems requiring multi-step solutions.

Preparation:

Learning any subject requires seeing it from many different viewpoints. One view is given in the lectures, the homework is another view, and the textbook can be considered a third. For the lectures to be useful, the student should have some familiarity with the subject matter beforehand. *Read the chapters before the lecture. Be familiar with the terminology* so that you can recognize the subjects when they are introduced. This will help you get more out of the lectures. *Also, students may get asked simple questions about the lecture material as part of the class participation grade.*

In this class, the goal is to make you technically competent at solving physics problems. This means that the mathematical framework of the subject will be stressed over the conceptual aspects. I believe that conceptual understanding is important, however, and I encourage the students to consult other books and media for this type of material. The textbook **Conceptual Physics** by Paul Hewitt is an excellent resource in this respect.

Rules:

Attendance is expected.

Be prepared to show your student ID or Driver's License on Exam days.

You may use the Student's Solutions Manual; HOWEVER *use of the Instructor's Solutions Manual is considered cheating. Students who use it will be subject to formal academic discipline charges*

Syllabus for Physics 212

Schedule (This is subject to change)

Date			Material
August	26		Introduction, Chap 21
	28		Chap 22
September	2		Chap 23
	4	Quiz	Chap 24
	9		Chap 25
	11	Quiz	Chap 26
	16		Chap 26
	18	Quiz	Chap 27
	23		Chap 28
	25	Review Session	
	30	**EXAM 1**	
October	2		Chap 29
	6	**Drop Deadline**	
	7		Chap 30
	9	Quiz	Chap 31
	14		Chap 31
	16	Quiz	Chap 32
	21		Chap 32
	23	**Review Session**	
	28	EXAM 2	
	30	Quiz	Chap 33
November	4		Chap 33
	6	Quiz	Chap 34
	11		VETERANS DAY
	13	Quiz	Chap 34
	18		Chap 35
	20	Quiz	Chap 36
	25	BREAK	
	27	BREAK	
December	2		Chap 36
	4	Review Session	
	9	**Final Exam**	

We will attempt to have review sessions outside of class before each of the three exams.