PHYSICS 17 **Spring 2008**

Introduction to Electromagnetism and Optics

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Text: Physics for Scientists and Engineers **6th edition**, by Paul Tipler and Gene Mosca, Volume 2, available at Jeffery Amherst College Store.

Assignments: In addition to reading roughly a chapter per week, you will be expected to complete a set of problems each week. Problem sets will be due each Wednesday at the beginning of class. You will not receive credit for homework turned in late, unless you have received an extension for a valid reason (illness, family emergency, etc.).

Get started on the homework early. Do not wait until the last minute!

Exams: There will be two "midterm" exams during the course (see the schedule). These will be held in the evenings (Wednesdays 7-9 pm). There will be a three-hour final exam to be scheduled by the Registrar. The exams will cover lab work as well as the text, homework, and lecture material.

Labs: The labs are an integral and important part of the course. Some of the labs will have formal written lab reports; others will be evaluated by informal "exit interviews." You **must** complete **all** of the labs satisfactorily to pass the course. You should have a bound (not looseleaf) laboratory notebook for lab. It should be used only for this class since notebooks may be collected for grading at the end of some lab meetings.

The lab will meet most Mondays or Tuesdays at 2 p.m., depending on the section, in Room 208. Please come in promptly at 2 p.m. since the initial part of lab time will be used for lab instruction, safety recommendations, etc. You should anticipate spending the full 3 hours (2 PM - 5 PM) completing the lab.

The laboratories provide an important complement to the lectures, readings and problems. In

Physics l7 this is especially true since the laboratory component runs somewhat independently of the lecture material. The laboratory syllabus gives the schedule of labs as we currently anticipate them this semester. The laboratories are either formal or informal in character. Details of what we expect will be described in the first lab period, the second week of class. Labs are a required part of the course. **They cannot be skipped.**

Grades: Your grade for the course will be based on all aspects of the course:

Homework	15%
Midterm exams	35%
Labs	25%
Final Exam	25%

INTELLECTUAL RESPONSIBILITY

Homework Assignments - You are encouraged to work with other students on your homework, but what you turn in must represent your own understanding of the problem. Copying a solution from another student or from a published source will be considered a violation of intellectual responsibility. This rule applies to solutions posted on the internet (such as, but not limited to, cramster.com).

Lab work - Discussion and cooperation between lab partners is encouraged during the lab session. Both partners should share equally in the collection of data. However, each student must keep a **separate** record of the data and do all calculations **independently**. It is important to preserve the integrity of data. Use of any data or calculations other than one's own and "fudging" of data (adjusting a number to something other than what you observed) are considered violations of the principles of Intellectual Responsibility.

Exams – The exams will be closed book. You will not be allowed to collaborate with anyone during an exam. What you submit must be entirely your own work.

Approximate Syllabus

Week of		
Jan. 27	Chapter 21	No Lab
Feb. 3	Chapter 22	HW 1 due Lab 1: DC Circuits (Formal)
Feb. 10	Chapters 23	HW 2 Lab 2: Wheatstone Bridge
Feb. 17	Chapters 24	HW 3 Lab 3: Introduction to the Oscilloscope
Feb. 24	Chapters 24 & 25	HW 4 No Lab Exam Feb. 27, 7 – 9 p.m.
March 2	Chapter 25 & 26	HW 5 Lab 4: Capacitors (Formal)
March 9	Chapter 26	HW 6 Lab 5: Inductors
March 16	Spring Break	
March 23	Chapter 27	HW 7 Lab 6: Faraday's Law and Induction
March 30	Chapter 28	HW 8 Lab 7: Properties of Light
April 6	Chapter 29	HW 9 No Lab Exam April 9, 7 – 9 p.m.
April 13	Chapter 30	HW 10 Lab 8: Geometrical Optics (Formal)
April 20	Chapter 31	HW 11 No Lab
April 27	Chapter 32	HW 12 Lab 9: Interference and Diffraction
May 4	Chapter 33	HW 13 No Lab