

Physics 121 Syllabus

Fall 2005

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Prerequisites: Physics 17

Required Materials:

1. *Principles of Physics*, Third Edition by Serway and Jewett (Thompson, 2002)
2. A scientific calculator

Attendance: Attendance at all class meetings is required. If you miss class, for any reason, you are required to hand in all class worksheets and all homework problems assigned in your absence. These are due by the second class you return. Each unacceptable or missed assignment will result in a one-point reduction in your final average.

Course Work: The course will be taught in a studio format that emphasizes active learning. In a given class meeting, there may be any combination of presentation, discussion, demonstration, lab work, or problem solving. There will be many opportunities for group work during the term. Although you may use the same data and graphs as your partner(s) and discuss concepts with your classmates, all work submitted for a grade must reflect your own understanding of the material. You are expected to be participating actively in the class sessions at all times. Class work may be collected and graded.

Homework: Homework will be assigned daily. The assignments will consist of readings in the textbook and problem sets. A subset of the homework may be collected and graded. The quizzes, tests, and exam will be based on these assignments, and therefore it is strongly recommended that you do all of the homework.

Quizzes: Short quizzes will be given at the beginning of class every Friday. The lowest quiz grade will be dropped. No makeup quizzes will be allowed.

Tests and Exam: There will be two hour exams during the term and a cumulative final exam. The hour exams and the final exam will consist of multiple-choice questions and/or free-response problems designed to test your understanding of the material. Emphasis will be placed on the demonstration of the ability to apply the concepts and techniques learned to new situations. **The final exam must be taken at the scheduled time.**

Laboratory: Laboratory work will be performed regularly. Part of the laboratory grade will be based on formal reports that will be required for a subset of the experiments that are performed. **You must have a passing grade in the laboratory component to pass the course, and you must complete all labs in order to receive a passing lab grade.**

Academic Honesty: The College has an academic honesty policy that will be strictly enforced in this course. Any student found guilty of plagiarism or any other form of academic dishonesty will be subject to appropriate disciplinary action.

In particular, written lab reports with identical or nearly identical phrasing will receive a

grade of 0% and be reported to the Deans as plagiarized. You may discuss the analysis, results, and content of your lab report with your lab partner(s) in general terms, but the final report handed in for a grade must be entirely in your own words.

Grading: Your grade will be based on a professional judgment of your work using the following weighting schemes as a guide:

	Method 1	Method 2
Hour Exams	40%	30%
Final Exam	25%	30%
Lab	20%	20%
Homework, Quizzes, & Classwork	15%	20%

Your final grade will be calculated by both methods, and you will receive the higher of the two grades.

Schedule: The tentative weekly schedule of material to be covered is included below. Note the dates of the two exams, Friday, September 30 and Friday, October 28. Only in unusual situations and with advanced notice will a make-up test be scheduled.

Week	Material	Sections in Text	Exams
1	Charge, Coulomb's Law, & Electric Fields	19.1-5	
2	Electric Fields	19.6-7, 19.11	
3	Electric Potential	20.1-4, 21.1-2	
4	Magnetic Fields	22.1-6	Friday
5	Sources of Magnetic Fields	22.7-9	
6	Induction	23.1-4	
7	Electromagnetic Waves	24.1-3	
8	Light as a Wave	24.7, 25.2-5, 25.7, 27.1-8	Friday
9	Light as a Particle	27.9-10, 24.8, 28.2, 11.5, 28.5	
10	Matter as a Wave, Lasers, & Quantum Physics	28.7, Context 7, 24.9 28.8-10, 28.13	