

Physics 121 Syllabus: Spring 2006

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Text: Principles of Physics, Fourth Edition by Serway & Jewett

Attendance: Attendance at all class meetings is required. An excused absence is one that the instructor excuses for what he/she deems to be sufficient reason. The student is responsible for all work missed during an absence.

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. It is important to your success in this course that you develop a sound understanding of the phenomena you are observing and analyzing. You are expected to participate actively in the class sessions at all times. Class work may be collected and graded.

Homework: Homework will be assigned and should be completed daily. The assignments will consist of readings in the textbook and problem sets. A subset of the homework may be collected and graded. Homework grades will be based on a few randomly picked problems. The quizzes, tests, and exam will be based on these assignments, and therefore, it is strongly recommended that the student do all the homework. Work on homework should be orderly and legible and always include units. Please staple multiple page assignments. I will not accept late homework except in cases of illness.

Quizzes: A number of quizzes will be given during the term. These will consist of problems very similar to the homework. **Make-up quizzes will not be given.** The lowest 2 quiz grades will be dropped.

Tests and Exam: There will be two hour tests during the term and a cumulative final exam, consisting of multiple-choice questions and/or free-response problems designed to test the students' understanding of the material. Emphasis will be placed on demonstration of the ability to apply the concepts and techniques learned to new situations. The final exam will be given as scheduled by the registrar, without exception.

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. All sources consulted, including web sources, must be cited. *Cases of cheating or plagiarism normally result in failure of the course.*

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
Tests	40% (2 at 20% each)	30 % (2 at 15% each)
Final	25%	30%
Homework, Quizzes, Classwork	15%	20%
Lab	20%	20%

Method 1 gives a greater weight to the hour exams, and a lower weight to the final exam, homework, and quizzes. Method 2 gives greater weight to the final, homework and quizzes, and a lower weight to the hour exams. 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 that the two tests will be taken by all Physics 18 students on the evenings of Thursday, April 20 and Tuesday, May 9. Please leave these evenings free. Only in unusual situations and with advance notice will a make-up test be scheduled.

<i>Week</i>	<i>Material</i>	<i>Sections in Text</i>	<i>Tests</i>
1 (27 Mar)	Charge, Coulomb's Law, & Electric Fields	19:1-5	
2 (3 Apr)	Electric Fields, Electric Potential	19:6-7, 11	
3 (10 Apr)	Potential and Circuits, Magnetic Fields	20:1-4, 21:1-2	
4 (17 Apr)	Magnetic Fields and Forces	22:1-6	Thursday April 20, 7 PM
5 (24 Apr)	Sources of Magnetic Fields	22:7-9	
6 (1 May)	Induction	23:1-4	
7 (8 May)	Electromagnetic Waves	24:1-3	Tuesday May 9, 7 PM
8 (15 May)	Light as a Wave	24:7, 25:2-5, 7, 27:1-8	
9 (22 May)	Light as a Particle	27:9-10, 24:8, 28:2, 5 11:5	
10 (29 May)	Matter as a Wave, Lasers, & Quantum Physics	28:7, Context 7, 24:9, 28:8-10, 28:13	
Final			Wednesday June 7 5:00-7:00 PM