

College Physics I

PHYS-1010

Fall Semester 2010

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TEXTS: *College Physics*, , 8th Ed., by Serway & Vuille. This text has been used before, so you may be able to find a used copy. If you get a used text, please make sure you get the 8th edition. Even though other editions may be available, it will be difficult to correlate page numbers and assignments from one edition to another. We will cover the first 14 chapters. The same book will be used for the Spring Semester, which makes the cost for this semester only half as much. (Don't you feel better about it now!?) For the laboratory, we will be using our own specially produced College Physics I Labs.

REQUIREMENTS:

1. Read ALL text material
2. Homework problems and activities
3. Laboratory activities and reports
4. Four unit exams
5. Comprehensive Final Exam

OBJECTIVES: At the conclusion of this course the student

1. will have begun to master foundational physics concepts needed in order to research and solve problems, generate new physical models and critically analyze competing models
2. will analyze, calculate, verify and apply physical models using appropriate mathematical, statistical, and laboratory skills.
3. will implement and use appropriate physics equipment for simple experimental investigations.

PRE-REQUISITES: Trigonometry or Pre-Calculus

GRADING:

A. Points available:

3 unit exams (100 points each)	300
1 final exam (comprehensive plus unit)	205
Homework quizzes and classwork (up to)	100
laboratory	100

Total: 705 points

B. Grading Scale:

91% and up: A	71% and up: C
81% and up: B	61% and up: D
Below 61%: F	

Generally the lowest three points of a range will be minus and the highest three points will be plus. In addition to this, I leave myself the option of raising the final average by a few points for the student who demonstrates a good attitude in class and out and shows improvement in his work over the course of the quarter. Usually this would not be more than the next higher (e.g., C+ to B-).

C. Attendance: Attendance at lectures and labs is required. If you have more than 5 unexcused absences from lectures, your grade will be reduced one level for each extra absence. If you miss lab for an unexcused reason, you will receive a zero grade for that lab. You will find that there are many good reasons for attending class. We will discuss some of them in the first class meeting.

D. Exams: The unit exams will consist of a variety of questions designed to probe your level of understanding of the materials covered. They will include completion questions, multiple choice questions, and questions requiring discussion and/or computations. Many, if not most of the questions will be modeled after the questions at the end of the chapter and after the homework problems, so be sure you are able to do every problem.

The final exam will be the only exam that will be intentionally comprehensive. Individual unit exams will not be, except insofar as each chapter

builds on the material of the previous ones. The comprehensive section of the final exam is intended as an opportunity to raise your grade on the previous exams. You cannot score lower on a section than your previous grade on the corresponding unit exam taken before the final.

E. Quizzes: We will have frequent short quizzes, most announced, but some unannounced. The purpose of quizzes is to encourage you to keep up-to-date in your preparation and to reward you for doing so. If you cut class and miss a quiz, you receive a grade of zero for that quiz. At the end of the semester 1 or 2 quizzes will be dropped.

F. Homework: There will be a set of problems for each chapter that everyone is responsible for. You should do these and understand them. Some will be collected and assigned a grade based on completeness, readability, and a reasonable attempt. Many will be the subject of chapter quizzes that will constitute your grade for that chapter's homework.

Homework that is collected is due at the beginning of class. Any additions made after class starts should be clearly indicated on your paper, even if you did them independently. Late homework (or labs) WILL NOT BE ACCEPTED unless you are absent with a valid excuse. If you plan to cut a class when homework is due, be sure to have someone hand your homework in at class time or slide it under my office door before class time. Do NOT send it by campus mail!

I encourage you to work together with others on the homework, but the final product should represent your own work and not someone else's.

Collected homework must be done on standard sized white paper, in blue or black ink, or DARK pencil. Place your full name in the upper right-hand corner. Use ONLY ONE SIDE to facilitate grading. Do not tear paper out of spiral bound notebooks, because this produces 'confetti' (a real mess) and makes the papers harder to handle. Papers not following these

standards will be returned for recopying and will lose points.

G. Laboratory Reports:

1. Read the experiment description completely before coming to lab and complete any pre-lab questions. There may be a quiz on this info.

2. Check board for special instructions and explanations.

3. Check that you have the appropriate apparatus.

4. Perform activity, following procedure step-by-step, recording data and making calculations accordingly, including estimates of uncertainty.

5. Complete all tables, graphs, calculations and questions suggested in the laboratory report section of the laboratory description. Include a log of what responsibilities each partner had.

6. Leave your report on the lecture desk before leaving or at the beginning of lab the next week, depending on which the instructor tells you for that lab exercise.

Requirements for acceptable lab reports will be given in the lab session. Unacceptable labs will be returned for revision and improvement, with loss of credit. All labs must be turned in. Late labs will receive progressively reduced credit.

H. Disability Services Statement: If you believe you may need support in managing the impact of a disability, please contact Amy Frey (Disability Services). Faculty rely on Disability Services to verify the need for academic accommodations and to identify reasonable and appropriate accommodation strategies. Examples of disabilities are hearing, vision, AD/HD, learning disabilities, psychological, orthopedic, and a health impairment. Disability Services is part of the Academic Enrichment Center - The Cove located in the Center for Biblical and Theological Studies Room 218. For more information, call (937) 766-7437. Remember: Sooner is better than later!

FINAL COMMENT: I consider my position here at Cedarville to be a ministry for the Lord. If I can help you in any way, academically or otherwise, please feel free to call me. I believe that the Lord has directed all of us to this course. In it, you will learn many interesting techniques, facts and insights. If you approach it realizing that the Author of Creation used the principles that we will deal with in this course in the structure of His creation, then you will appreciate it even more. Also, we will be working on the development of your thinking and problem-solving skills. Together with the discipline that you will develop by working through the problems and the study, this can benefit you both academically and spiritually. May the Lord richly bless us as we study His Creation.

Teacher Education Program Information:

Teacher Education Program Unit and Program Assessments Assigned to Course

Unit Outcome	Program Outcome	Decision Points	Assessment
Competence	NSTA Std 1a.	4	#1 Content Knowledge
Competence	NSTA Std 1a.	1, 2, 3, 4	#2 Content Knowledge

Latest Revision: 08/18/10