Physics 112-02: Fundamentals of Physics
Spring 2007

Logistics

Meetings: T-Th 9:30-10:45 in Frazier Jelke Science Hall, FJA
Instructor: Deseree Meyer Office: 217 Rhodes Tower
Phone: 843-3915 Email: meyerd@rhodes.edu
Office hours: T-W 1:00-3:00, immediately after class, and by appointment
I am not available Thursday afternoons or before class.
Course materials: available in my public folder
\\Fileserver1\acad_dept_pgm\Physics\Meyer_Deseree\Public\Fun Physics 111-02

Text

Raymond A. Serway and John W. Jewett, Jr., *Physics for Scientists and Engineers*, 7th Edition, Thomson Learning, Inc., ISBN 0-495-01312-9

Objectives

This course introduces you to the fundamental physical principles of thermal and electromagnetic phenomena. In the process, we will improve your quantitative and analytical skills. We will also foster your intuition about physics and your ability to interpret everyday events within the framework of physics. I want to impart to you a respect and understanding of physics and show you how physics can be approachable, interesting, and relevant.

Requirements

Homework	25%
Three tests	45%
Final exam	30%

Grading Procedures

All graded work will be scored numerically. Corresponding letter grades can be estimated according to the following table:

Percentage score	Letter grade	Percentage score	Letter grade	Percentage score	Letter grade
95-100	A	80-82	B-	67-69	D+
90-94	A-	77-79	C+	63-66	D
87-89	B+	73-76	C	60-63	D-
83-86	B	70-72	C-	Below 60	F

Late homework assignments will be penalized by 10% of the possible score per day (including weekends and holidays) that they are late. Since concepts in the course build on each other, I want to stress the importance of keeping up with the course.

Make-up exams may be arranged provided that the student receives approval from the instructor *before* missing an exam. If approval is not received before missing an exam, a make-up exam *may* be given, at the instructor's discretion, with a 15% penalty.

The conditions of the Honor Code described in the Rhodes College Student Handbook (http://www.rhodes.edu/Honor/index.cfm) apply to all assignments in this course.

Students should be on time and involved in class at every meeting. Along these lines, no electronic devices that might distract you, another student, or the instructor are permitted in class. If distractions occur (*e.g.* an audible cell phone ringing), I reserve the right to ask you to leave class. You will still be responsible for any material covered.

Course Calendar (subject to change)

Date	*Topic*	*Reading*	*HW Due*
10-Jan	temperature and thermal expansion	19.1-19.5	
15-Jan	thermal energy and change of state	20.1-20.3	
17-Jan	First Law of Thermodynamics	20.4-20.7	Ch. 19
22-Jan	transfer of thermal energy	21.1-21.2	
24-Jan	ideal gas law and kinetic theory of gases	21.3-21.5	Ch. 20
29-Jan	review		Ch. 21
31-Jan	Test 1		
5-Feb	electric force and electric field	23.1-23.7	
7-Feb	electric field and Gauss's Law	24.1-24.4	Ch. 23
12-Feb	electric potential & electric potential energy	25.1-25.6	
14-Feb	electric potential and capacitance	26.1-26.6	Ch. 24 & 25
19-Feb	current and resistance	27.1-27.4	
21-Feb	voltage, energy, and power	27.4-28.2	Ch. 26 & 27
26-Feb	circuit principles	28.3-28.8	
28-Feb	magnetic field and electrodynamics	29.1-29.6	Ch. 27 & 28
4-Mar	No class – spring break		
6-Mar	No class – spring break		
11-Mar	magnetic force	30.1-30.7	Ch. 29
13-Mar	Test 2		
18-Mar	induced EMF	31.1-31.3	Ch. 30
20-Mar	No class – Easter recess		
25-Mar	generators	31.4-31.6	
27-Mar	inductance & Maxwell's equations	32.1-32.4	Ch. 31
1-Apr	electromagnetic waves	34.1-34.7	
3-Apr	review		Ch. 32 & 34
8-Apr	Test 3		
10-Apr	reflection and refraction	35.1-35.8	Ch. 34
15-Apr	lenses	36.1-36.4	
17-Apr	image formation	36.6-36.10	Ch.35 & 36
22-Apr	interference	37.1-37.7	
24-Apr	review		Ch. 36 & 37
3-May	final exam – 8:30 am		