

PHYSICS 104  
Spring 1996

Prerequisites: Physics 103 or equivalent.

Materials Needed:

Text: Serway & Faughn, College Physics, fourth edition.

Physics 104 Lab Manual, Spring 1996.

Lab notebook: preferably hard bound with cross-hatched ruling.  
Bring to first laboratory meeting (week of Jan 29).

Calculator: preferably with trigonometric, exponential, and logarithmic functions. Know how to use it, and make sure batteries are charged for exams.

Lectures: 1:20 or 2:25 pm MWF in 1300 Sterling Hall. Profs. Clint Sprott (3285 Chamberlin, 263-4449, sprott@juno.physics.wisc.edu) and Don Cox (5205 Chamberlin, 262-5916, cox@wisp.physics.wisc.edu). Course information is also available on the World Wide Web at <http://sprott.physics.wisc.edu/104syl.htm>. The lectures supplement but do not substitute for the reading. Read the assigned material before lecture.

Discussion sections: Your discussion section will be led by your TA who will be your prime contact and source of assistance. General questions about the homework are allowed before it is due, but don't expect your TA to work out the solutions for you in advance.

Laboratory: Follow the instructions in the introduction to the laboratory manual. The experiments are to be written up during the laboratory period in the lab notebook. Have your lab instructor initial and date the work before you leave the lab. The lab notebook is not to be taken from the lab except with permission of your instructor.

Homework: The homework problems are assigned in the syllabus for each week and should be handed in at the beginning of the Monday lecture the following week. Late problem sets will not be accepted. Homework will count toward your grade. Feel free to discuss the homework with others, but make sure the paper you turn in is not simply copied from someone else. The solutions will be discussed in your discussion section and placed on reserve in the Physics Library (4220 Chamberlin).

Hour Exams: Exams will be given at 7:15-8:15 pm on the following Thursday evenings:

February 15, Chapters 15-17  
March 21, Chapters 18-21  
April 18, Chapters 22-25

The exams will be closed book, but you will be allowed one 8 1/2 x 11-inch sheet of paper on which you may write anything you wish. The exams will be graded and handed back in your discussion section. Solutions will be discussed and placed on reserve in the Physics Library (4220 Chamberlin).

Final Exam: The final exam will be at 7:25-9:25 pm on Saturday, May 11 (room to be announced). It will cover the entire course (Chapters 15-30) with equal weight. You will be allowed two 8 1/2 x 11-inch sheet of notes.

Grading: The course grade will be made up of the following components:

3 hour exams	300 points
Final exam	200 points
Labs and homework	100 points
TOTAL	600 points

Lab and homework grades will be assigned by your TA and will be normalized to the distribution on the hour exams. Letter grades will be assigned based on the total number of points accumulated.

Consultation Room: Room 2402 Sterling is staffed by TA's during much of the week. See the schedule card on the door. You may ask questions of any of the TA's or come during the hours that your TA is there. You may also make an appointment with your TA at any mutually convenient time and place.

Alternate References: To see the same topics explained differently, try the following on reserve in the Physics Library (4220 Chamberlin):

Blatt, Principles of Physics, 3rd edition  
Cutnell and Johnson, Physics, 3rd edition  
Giancoli, Physics, 4th edition  
Jones and Childers, Contemporary College Physics, 2nd edition

General Advice: Physics is not something you read and memorize, rather it is something you learn how to do. Try the following study procedure:

- 1) Read the chapter prior to lecture, so that you will know what it's about.
- 2) Listen carefully to the lecture and take notes.
- 3) Do not go back and read and re-read the chapter until you "understand it." Rather, start working problems, going back through the chapter to clarify points as they come up.

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 SYLLABUS

References are to Serway & Faughn, College Physics, fourth edition.  
 Lab manual is Physics 104 Lab Manual, Spring 1996

<u>Week</u>	<u>Reading</u>	<u>Problems</u>		<u>Lab</u>
1/22	Chap 15	5, 20, 34, 51, 66		no lab
1/29	Chap 16	7, 16, 36, 44, 54		E1
2/5	Chap 17	11, 18, 36, 40, 53		E2
2/12	Chap 18	6, 22, 34, 37, 59	Exam	makeup
2/19	Chap 19	6, 22, 29, 43, 54		E4
2/26	Chap 20	5, 11, 24, 41, 52		E6
3/4	Chap 21	4, 12, 23, 37, 53		E7
3/18	Chap 22	4, 26, 35, 46, 51	Exam	makeup
3/25	Chap 23	4, 12, 29, 57, 68		E8
4/1	Chap 24	5, 18, 38, 50, 57		L2
4/8	Chap 25	8, 17, 25, 48, 62		L3
4/15	Chap 26	7, 19, 32, 47, 61	Exam	makeup
4/22	Chap 27	8, 24, 40, 45, 58		L1
4/29	Chap 28	6, 24, 32, 39, 42		L5
5/6	Chap 29	11, 22, 29, 45, 67		N2

5/11 Final exam Saturday, 7:25 pm, Chapters 15-30 (room to be announced)