Physics 121
Spring 2009

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Title: Fundaments of Physics I

Lecture: MWF 1:00 PM, Phys 1410

Disc/Lab:
0201 W9 (3301)
0202 W2 (Chm 2201)
0203 M2 (1402)
0204 Tu2 (4208)

Textbook: College Physics
Knight-Jones-Field
Addison Wesley

Math Background: As you know, this is the first semester of a two-semester course on the fundamentals of Physics. We will not use calculus. However, algebra and trigonometry are used throughout. Review your high school knowledge thoroughly. If you need help, get it as soon as possible. As described below, I am always available. Never hesitate to let me know if you are experiencing difficulties. The only way to alleviate a problem is to address it immediately. So do me (and yourself) a favor by discussing it today. The textbook provides an excellent skeleton on which to build the course. We will, of course, stray from it quite often. I shall make it a point to notes in online to supplement the text. In any case, try not to miss class. However, if you do miss a class, I invite you to borrow my class notes. It is useful to remember that the Exams are based on lecture content, so please take heed. God bless you and let us look forward to an exciting time together.

Homework: Weekly homework problems are listed on the attached schedule. Do them. Although we will not collect and grade your homework, there will be several quizzes (Q on schedule), using homework problems directly. Also, the examinations will have very similar problems. The bottom line is: if you cannot do the homework, you cannot expect to get a good grade. [Note Prob. #1-17 means Prob. 17, chap. 1] Unless otherwise announced in class, the Quiz is one of the problems of the previous week.

Solutions: Will be posted each week in glass cases outside the lecture halls as well as online.

Test Questions/Review: About two weeks prior to every exam a set of test questions will be posted online. This should give you time to develop your answers prior to the review which is typically scheduled for Tuesday prior to the Exam.

Tests: a) There will be three (3) examinations, each lasting a full period. Dates are in the attached schedule.

b) Ten (10) 10-minute quizzes during class (Q on schedule).

c) Avoid make-ups.

d) The final exam is scheduled for May 15, 2009, from 1:30PM-3:30PM. You cannot pass without taking the final.

Laboratory: The experiments in the laboratory are an integral part of this course. Ten (10) experiments are scheduled. All must be done. You cannot pass this course unless you do every experiment, and submit a report. Further details are on a separate sheet.

Grading: Your grade is figured out as follows.

Best 8 of 10 quizzes	100
Lab Reports	100
Best 2 of 3 "hourlies"	200
Final Exam	200
*Discussion	≤50 (Bonus)

Extra Help:

a) The instructor is available for discussion at all times. I am usually in my office (Z-2331) or laboratory (Z2221) from about 9:30 AM to about 6:30 PM, Monday through Friday. Feel free to walk in. If you desire an especially extended visit, call 56144 or 56159 to ensure that I have a time slot free. If you have any difficulty at all, never hesitate to drop by. Also I keep a record of your visits. You can earn up to 50 points (or 10 percent of your earned grade points) by showing up with your questions.* You may call me at home (301-345-5308) but not later than 10 PM.

b) Coming for a visit? Make it A.S.A.P., God Bless You!

c) Slawsky Clinic is an excellent (free) tutoring service. It is staffed by very dedicated physicists who can help you improve your problem solving skills. Do take advantage of this highly acclaimed feature of the physics department.

Schedule

Date		Chapter	Problems
WEEK 1			
Jan/Feb	M 26	1 Length	1-7, 8
	W 28	Time	1-12, 13, 15, 17
	F 30	Motion	1-21, 28, 31, 33
WEEK 2			
Feb	M 2	2 Motion in	2-5, 8, 12, 14
	W 4	One	2-17, 24, 26, 29
	F 6(Q)	Dimension	2-32, 35, 52, 56
WEEK 3			
Feb	M 9	3 Vectors	3-7, 15, 17, 23
	W 11	2-D Motion	3-25, 28, 31, 33
	F 13(Q)	Rel. Motion	3-43, 48, 54, 58
WEEK 4			
Feb	M 16	4/5 Forces	4-1, 13, 18, 24
	W 18	Newton's	4-25, 56, 66, 67
	F 20(Q)	Laws	5-4, 6, 13, 16
WEEK 5			
Feb	M 23	5 Equilibrium	5-20, 23, 25, 28
	W 25	Dynamics	5-35, 37, 51, 63
	F 27	EXAM I	
WEEK 6			
Mar	M 2	6 Circular	6-1, 5, 10, 13
	W 4	Motion	6-16, 19, 21, 27
	F 6 (Q)	Gravity	6-32, 35, 39, 45
WEEK 7			
Mar	M 9	6 Gravitation	6-56, 63; 7-2, 7
	W 11		7-10, 16, 23, 27
	F 13 (Q)	7 Rotation	7-33, 39, 49, 64, 65
WEEK 8			
Mar	M 16	Spring Break	
	W 18	Spring Break	
	F 20 (Q)	Spring Break	

02 - SECTIONS

Date	Chapter	Problems
WEEK 9		
Mar M 23	7/8 Rigid Bodies	8-1,6,9,14
W 25	8	8-17,40,45,49
F 27(Q)	10 Conservation Energy	10-4,5,10,13
WEEK10		
Mar M 30	10 Conservation	10-16,21,28,35
Apr W 1	~~EXAM II~~	
F 3	10 EXAM II	10-42,44,53,61
WEEK 11		
Apr M 6	9 Conservation	9-4,11,13,16
W 8	9 Law	9-22,24,27,29
F 10 (Q)	9 Momentum	9-30,39,35,71
WEEK 12		
Apr M 13	12	
W 15	Thermal	12-2,10,12,14
F 17(Q)	Properties	12-19,24,27,29
		12-34,38,45,48
WEEK13		
Apr M 21	11	
W 23	Thermodynamics	11-6,13,16,18
F 24 (Q)		11-20,23,27,32
		11-33,45,50,59
WEEK 14		
Apr/May M 27		
W 29	11/13	
F 1(Q)	Thermodynamics	
	EXAM III	
WEEK 15		
May M 4		
W 6	13	
F 8(Q)	Oscillations	
WEEK 16		
May M 11	Review	
FINAL EXAM	May 15, 2009 (Friday)	1:30pm -3:30pm