Phys 122 –MWF
Fall 2004

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Title: Fundamentals of Physics II

Lecture MWF 1:00 PM, Phys 1410

0101	M 3	Phys 3301
0102	Tu 9	Phys 1219
0103	Tu 11	EGR 3102
0104	Tu 1	Phys 4220
0107	Th 1	Phys 0405

Textbook: Serway/Faughn
College Physics, 6th Edition
Thomson Brooks/Cole

Math Background: As you know, this is the second semester of a two-semester course on the fundamentals of Physics. We will not use calculus. However, algebra and trigonometry are used throughout. Review again 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 hand out notes in the class to supplement the text. In any case, if you 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 using homework problems directly. Also, the hourly examination will have somewhat similar problems. The bottom line is: if you cannot do the homework, you cannot expect a good grade

Solutions: Will be posted each week in glass cases outside the lecture halls and in reserved sections of the Engineering Library (Math Bldg).

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 Tues., Dec. 14, 2004, from 1:30–3:30 PM. 19. 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.

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 9:00 AM to about 6:00 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) T. A's will post their office hours

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 (M-W-F)

Date	Chapter	Problems
Aug/Sept		
Wk 1 M30	**Review 121**	Diagnostic Test
W1	13, Waves	13-38, 41, 42, 44, 46
F3	13, Waves	13-48, 51, 52, 53, 60
Wk 2 M 6	**LABOR DAY**	
W 8	13, Waves	13-64, 65, 68
F 10 **(Q)**	14, Sound	14-6, 7, 10, 12, 15
Wk 3 M 13	14 Sound	14-17, 19, 21, 26, 27, 30
W 15	14 Sound	14-36, 39, 44, 46, 49, 53
F 17 **(Q)**	15 $\vec{E}$ -field (Coulomb)	15-3, 6,10,13,15
Wk 4 M 20	15 $\vec{E}$ -field (Coulomb)	15-19, 22, 24, 25, 27
W 22	15 $\vec{E}$ -field (Coulomb	15-28, 33, 36, 38, 40
F 24 **(Q)**	15 $\vec{E}$ field (Coulomb)	15-43, 45, 46, 50, 57
Sept/Oct		
Wk5 M27	16, EL Energy	16-3, 7, 9, 11, 15
W29	16, EL Energy/Cap	16-19, 23, 27, 31, 37
F1 **(EXAM1)**		
Wk 6 M 4	16, Capacitance	16-44, 49, 50, 54, 56
W 6	17, Current	17-1, 5, 8, 15, 19
F 8 **(Q)**	17, Current/Resistance	17-21, 29, 33, 39, 41
Wk 7 M 11	17/18, Resistance	17-45, 52, 62, 18-1, 3
W 13	18, D.C. Circuits	18-5, 7, 9, 12, 13
F 15 **(Q)**	18, D.C. Circuits	18-17, 21, 30, 33, 36, 40
Wk 8 M 18	19, $\vec{B}$ Field	19-2, 5, 9, 13, 18
W 20	19, $\vec{B}$ Field	19- , 21, 23, 25, 29, 33
F 22 **(Q)**	19, $\vec{B}$ Field	19-37, 41, 46, 49, 56
Wk 9 M 25	20, Induction ($\vec{E}_{NC}$)	20-3, 7, 10, 13, 17
W 27	20 Non-Coulomb $\vec{E}$	20-21, 25, 30, 33, 39
F 29 **(Q)**	20, Non-Coulomb $\vec{E}$	20-45, 46, 49, 51, 52
Wk 10 Nov. M 1	21, A.C. Circuits	21-3, 7, 11, 15, 17
W 3	21, A.C. Circuits	21-19, 21, 23, 27, 31

	F 5 **(EXAM II)**		
Wk 11	M 8	21, EM Waves	21-34, 39, 42, 44, 47
	W 10	21, EM Waves	21-48, 49, 52, 54, 63
	F 12 **(Q)**	22, Geom. Optics	22-2, 5, 6, 9, 17
Wk 12	M 15	22, Geom. Optics	22-19, 24, 32, 37, 38
	W 17	23, Geom. Opt/Mirrors	22-41, 42, 23-3, 5, 9
	F 19 **(Q)**	23, Mirrors	23-11, 13, 15, 17, 19
Wk 13	M 22	23, Lenses	23-23, 25, 27, 31, 35
	W 24	23, Lenses	23-39, 44, 45, 46, 58
	F 26	**THANKSGIVING**	
Wk 14	Nov/Dec M 29	24, Wave Optics	
	W 1	24, Wave Optics	
	F 3 **(EXAM III)**		
Wk 15	M 6	24, Wave Optics	
	W 8	24, Wave Optics	
	F 10 **(Q)**	**Review**	

FINAL EXAM **Tues- December 14, 2004** **1:30-3:30 PM**