

Physics 202- 6A

COLLEGE PHYSICS

Spring, 2005

Lecture: TTH 8:00 - 9:45 am

Instructor: Dr. Harrison

Textbook: Physics by Cutnell & Johnson
(Wiley & Sons, 6th Ed., 2004)

Room: 301 CH

Office: 308 CH

Hours: MF 1:30 - 2:30 pm

email: jgharrison@uab.edu

Course Website: <http://homework.phy.uab.edu/~harrison/phys202>

Composition of Final Course Grade

Exam I	15%	(60 min)	} These exams will be given during the last hour of the period
Exam II	20%	(60 min)	
Exam III	20%	(60 min)	
Lab	15%	(transfer of old grade is your responsibility)	
Quizzes	5%	(unannounced, open-book, open notes, at end of period)	
Final Exam	25%	(2.5 hrs. Thu., Apr. 28, 8:00 - 10:30 am)	
Homework	5%	(i.e. up to 5 points extra credit added to course grade)	

Grading Scale: 100-90 A, 89-80 B, 79-70 C, 69-60 D, < 60 F

Withdrawing From This Course

Undergraduates may withdraw from a course and receive a grade of "W" up to and including March 8, 2005. After that date you may not withdraw. See the 2004-2006 Undergraduate Catalog (<http://www.catalog.uab.edu/show.asp?durki=58266>) for the full text of this policy.

Use of reference material during exams

You may bring to each exam one 5" x 8" card on which you may write anything you feel may be useful (formulas, examples, etc.). The card must have your name printed at the top and must be turned in with the examination paper.

Problem Assignments

You will be given a set of individualized homework problems to be collected and graded by the CAPA system. You may work on these at your own pace. The grade assigned by CAPA can be used to add up to 5 points to your final grade. A second set of problems is listed in the course schedule below. These will **not** be collected or graded. Solutions will be posted on the course web site. You should work through the problems on your own before going through the posted solutions. *Do not fall into the trap of thinking that you can adequately prepare for exams by just reading through the solutions. Success on the exams depends on your ability to solve problems not just your ability to follow solutions.*

Major Topics/Objectives

The principal topics covered in this course are: 1) Electricity and Magnetism (Ch. 18-24), 2) Optics (Ch. 25-27) and 3) Modern Physics (selected sections of Ch. 29-31). Our principal mathematical tools will be algebra and trigonometry. By the end of the semester you should be able to: 1) Read a description of a problem, identifying key words and phrases that point to a solution. 2) Set up a figure or diagram to assist in analyzing the problem. 3) Determine what equations are needed and carry out the mathematical operations to arrive at a solution. Thus the central goal is *not* memorization of formulas but development of analytical skill.

Note: The order of topics covered in the laboratory may be such that some experiments involving Modern Physics topics will precede their discussion in the lecture. Thus you will have to take some extra time to prepare for those labs by reading ahead in the textbook.

Quizzes

You should come to class prepared for a short 10- or 15-minute quiz on material previously covered in class or in your textbook. Quizzes will not be given at each class meeting, but will NOT be announced ahead of time and, when given, will be given at the end of the period. These will be open-book/open-notes format, BUT strictly limited in time; “winging it” won’t work -- come prepared.

Syllabus

The attached syllabus is tentative. Any changes will be announced in class. You are responsible for any changes which may be announced during the lecture period, such as changes in exam dates or chapters to be included on an exam

Week of	Tue.	Thu.
Jan. 2	18.1 – 18.5	18.6 – 18.9
Jan. 9	19.1 – 19.4	19.5; 20.1 – 20.2
Jan. 16	20.3 – 20.7	20.8 – 20.11
Jan. 23	20.11 – 20.15	20.15; 21.1 –21.2
Jan. 30	21.2; Exam I (Ch. 18–20)	21.3 – 21.5
Feb. 6	21.6 – 21.8	21.8 – 21.9
Feb. 13	22.1 – 22.3	22.3 – 22.5; 22.7 (skip 22.6)
Feb. 20	22.8 – 22.9; 23.1	23.2 – 23.4
Feb. 27	23.4 – 23.5	24.1 – 24.4
Mar. 6	24.5 – 24.6	25.1 – 25.2; EXAM II (Ch. 21 –23)
Mar. 13	25.2 – 25.6	26.1 – 26.3
Mar. 20	26.4 – 26.7	26.8 – 26.11
Mar. 27	Spring Break	
Apr. 3	26.11; 27.1 – 27.2	27.3; Exam III (Ch. 24 –26)
Apr. 10	27.5 – 27.7 (skip 27.4, 27.8 - 27.9)	30.1 – 30.5
Apr. 17	30.5 – 30.6; 31.1 – 31.3	31.3–31.4; 31.6–31.7 (skip 31.5; 31.8–31.9)
Apr. 24	NO CLASS	Final Exam 8:00 - 10:30 am

CAPA Problem Assignments			
Set	CAPA Problem #	Ch	Close Date
1	2, 10, 12, 16, 20, 28, 32, 38, 45, 62, 66	18	Feb. 6
2	2, 4, 9, 12, 20, 28, 30, 36, 40, 44, 54	19	Feb. 6
3	7, 25, 32, 40, 46, 53, 58, 62, 68, 72, 88, 100, 104, 108	20	Feb. 6
4	59, 60, 61, 63, 64, 65, 73, 76, 78, 87	20	Feb. 6
5	6, 8, 12, 21, 28, 32, 36, 41, 46, 53, 54	21	Mar. 20
6	2, 14, 16, 18, 22, 26, 36, 42, 44, 48, 50, 58	22	Mar. 20
7	3, 4, 7, 11, 15, 19	24	Mar. 20
8	1, 6, 16, 18, 20, 24, 26, 30, 34, 36, 38	25	Mar. 20
9	8, 14, 26, 30, 32, 36, 38, 40, 46, 48, 56, 102, 108	26	Apr. 21
10	10, 16, 38, 42	27	Apr. 21
11	1, 10, 21	30	Apr. 21

Extra Problem Assignments

Set	Problem #	Ch	Post after
1	2, 5, 10, 12, 16, 30, 33, 47, 49, 57, 62	18	Jan. 9
2	3, 8, 16, 19, 30, 34, 39, 44, 51	19	Jan. 13
3	3, 6, 15, 21, 33, 48, 53, 58, 67	20	Jan. 20
4	75, 77, 81, 88, 87, 95, 106, 108	20	Jan. 27
5	7, 11, 18, 29, 30, 34, 53, 65, 71, 72	21	Feb. 10
6	2, 3, 7, 16, 26, 32, 39, 44, 58, 59, 77	22	Feb. 22
7	3, 8, 13, 20, 27, 30, 33, 39, 42	23	Mar. 1
8	4, 7, 10, 14, 29, 35, 41, 44, 47, 53	24	Mar. 8
9	6, 10, 16, 22, 31, 34, 38	25	Mar. 15
10	4, 8, 9, 11, 20, 29, 32, 44, 65, 69, 76, 113	26	Mar. 24
11	2, 6, 10, 13, 16, 20, 24, 28, 44, 51	27	Apr. 12
12	1, 3, 12, 18, 23, 29, 51, 52	30	Apr. 19
13	4, 10, 12, 16, 18, 29, 35, 42, 48	31	Apr. 19