

Physics 221 Syllabus

Summer 2004

Dr. Sanders
Nielsen 214 or 504
974-7827/576-6931

Office Hours:
8:00-12:30 MWF

Lecture Hours:
9:10-10:25 MWF

Text: *College Physics* by Giancoli, 5th edition

General Course Description

This course is intended to provide a foundation on kinematics, dynamics, thermodynamics, waves, and optics. Prerequisite: Math 130 (precalculus) or calculus. A good (>3.2) GPA is desirable.

Grading Policy All tests and quizzes are closed-book. The semester grade will be computed as follows:

Average of 3 hour tests	30%
Lab average	30% (must score at least 60 to pass course)
Pop quiz average (if applicable)	(see below)
Homework	10% (must score at least 60 to pass course)
Final exam	30%
Total	100%

Semester grades will be curved. Median = C+

Attendance and Quizzes Grade performance is strongly correlated with regular attendance. Roll may be taken. If absences become noticeably large, pop quizzes will begin, and the pop quiz average will be 10% of your final grade, while the hour tests and lab averages will decrease 5%. Your lowest pop quiz grade will be dropped. If you need to leave or arrive late, I would appreciate advance notice *by E-Mail*.

Makeup Policy A comprehensive make-up hour test will be given at **07:00 July 30** unless otherwise arranged. It will be difficult. This test may be substituted for one (1) missed hour test. You are strongly encouraged to take all hour tests. In particular, it is usually a bad mistake to skip the first test just because you think you have not studied enough to do well on it.

No pop quiz make-ups. Make-ups of recitation quizzes or labs at lab instructor's discretion.

Homework Homework will be web-based: *homework.phys.utk.edu/*. You will need a password and your UT e-mail address for authorization for each session. It is recommended that you attempt all homework problems *before* the corresponding lecture, in order to maximize the benefit of lecture. Test problems are often re-worded versions of homework problems. *Verbum sapientibus.* .

Calculators A calculator with trig functions is required. Desirable that calculator have full display of equation and capability for re-display and editing (e.g., TI30X II, anything in TI80 series, Casio CFX-9850GB+).

Bomb Threats In the event of a bomb threat in the Physics Building during/before an exam, turn in your exam booklet and assemble at the flag pole. An alternative examination room is pre-arranged.

Use of old lab grades If you are repeating, you may wish to use an old lab grade. In this case, (1) you must attend recitation; your new lab grade will be an average of your new quiz grade and your old lab grade; (2) you must also attend lab until your previous TA or lecturer sends your old lab grade to me and to your current lab instructor by e-mail; this must happen by the first drop deadline (**June 24—not July 19**);

otherwise you must continue to attend lab, and (3) the old lab grade must be no more than 1 year old.

Academic Honesty Academic honesty is expected at all times.

The hard-copy syllabus takes precedence over any other information except announcements in lecture.

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Schedule

This schedule is tentative. Students are responsible for any changes announced in lecture.

<u>Lecture, Date</u>	<u>Chapter; subject matter</u>	<u>Homework--in case on-line down</u>
1 Wed Jun 02	1: models, units, dimensions, uncertainties	Q 1, 5, 8; P 1,19,35,38,47
2 Fri	2: 1-D motion; constant acceleration	Q 1, 5; P 1,13,19,21,29,33,37,41
3 Mon Jun 07	3: 2-D motion; vectors	Q 1,3, 7; P 1,5,9,17,19,27,33,35
4 Wed	4: force; Newton's laws	Q 1,3,9; P 1,5,7,13,15,17,19,
5 Fri	4 cont: Newton's laws	23,25,27,31,33,35
6 Mon June 14	Review/problem session	
7 Wed June 16	Hour Test I, on Chpts 1-4	
8 Fri	5: circular motion; gravitation	
9 Mon June 21	6: work & energy; energy conservation	
10 Wed	7: linear momentum; conservation laws	
11 Fri	8: rotational motion	
12 Mon June 28	9: bodies in equilibrium	
13 Wed	9 cont: elasticity & fracture	
14 Fri	Review/problem session	
15 Mon July 5	Holiday -- Independence Day	
15 Wed July 7	Hour Test II, on Chpts 5-9	
16 Fri	10: fluids	
17 Mon July 12	11: vibrations; simple harm. motion	
18 Wed	11: waves	
19 Fri	12: sound	
20 Mon July 19	13: temp; ideal gas laws; kinetic theory	
21 Wed	Review/problem session	
22 Fri July 23	Hour Test III, on Chpts 10-13	
23 Mon July 26	14: heat; heat transfer (3 ways)	
24 Wed	15: thermodynamics	
25 Fri	23: light rays; lenses; mirrors (Note: chapters 16-22 will be in Phys 222)	
26 Mon Aug 2	24: wave optics; diffraction; interference	
27 Wed	Recapitulation of entire course	
28 Fri Aug 6	Final Examination, comprehensive (same time as lecture)	

Schedule is subject to change. Students are responsible for ascertaining changes, especially the actual dates of tests.