PHYSICS 220
General Physics II
Davidson College, Spring 2015

Professor John Yukich **Dana 169**
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TEXT: Physics, Giancoli, 7th edition.
LECTURE: MWF 11:30 AM – 12:20 PM, Dana 146
LABORATORY: Wednesday 2:30 – 5:30 PM or Thursday 1:00 – 4:00 PM, Dana 127
OFFICE HOURS: will be announced and posted outside my door and on the class Moodle page.

OBJECTIVES: This course is the second half of a two-semester sequence of introductory physics taught without calculus. Topics will include electricity, magnetism, optics, and modern physics. The primary objectives of the course are to develop your understanding of fundamental physical principles, and to develop your analytical and problem solving skills. *Working lots of problems from the text, or similar texts, is essential to meeting these objectives!* The assigned homework is really only a sample of important problems and I expect students to work additional problems independently, with classmates, or with my assistance.

ATTENDANCE: The attendance policy for this course follows the college's 25% rule. Please initial the roll on the side board each day in lecture. Attendance is also required at all reviews and labs. Each student is responsible for material presented in class and announcements made in class. Your understanding of the lectures will be greatly enhanced by studying the relevant text material *before* class!

HOMEWORK: Homework assignments will be made on a regular basis, consisting of questions and problems taken from the text. Homework sets for a chapter will be turned in to be graded at the beginning of the next class meeting following the end of that chapter in lecture (with some exceptions; see schedule below). I strongly urge each student to discuss the homework assignments with other students; however, each homework set must be a product of the student's own understanding of the assignment. This means that you may discuss each other's problem-solving strategies and solutions, and you may even *look* at one another's work (with the other student's permission, of course!). However, *copying* another person's work – regardless of the source - is a violation of the honor code as it applies to this class. Simply stated, you must write your own solutions without simultaneously looking at another person's work. The word "PLEDGED", along with your signature, on the homework set signifies your compliance with the above policy. *Late or unpledged work will not be accepted,* and unsupported work will not be given full credit.

REVIEWS/FINAL: There will be three reviews during the semester, each one composed of problems and/or questions related to the topics found in the homework assignments, lectures and laboratory assignments. The final will be a self-scheduled, closed-book, comprehensive examination following the same format as the reviews.

GRADING: Homework 20%, Reviews 40%, Lab 15%, Final Exam 25%.

LABORATORY: The weekly laboratory sessions will help bring to life the fundamental physics discussed in class and in the text. The labs will develop your familiarity with physical apparatus and methods of scientific inquiry, and enhance your understanding of the basic principles of physics. For this part of the course, you should purchase a spiral-bound laboratory notebook. The lab handouts are available on the lab course Moodle page. Further details regarding this part of the course will be discussed during the first lab session (see schedule below).

DATE	CHAPTER ASSIGNMENT	HOMEWORK DUE	LAB
Jan. 12 Jan. 14 Jan. 16	Introduction, Ch. 16 Ch. 16 Ch. 16	No homework due this week	Electrostatics & CSEM
Jan. 19 Jan. 21 Jan. 23	No class (MLK day) Ch. 17 Ch. 17	Ch. 16 due	No lab
Jan. 26 Jan. 28 Jan. 30	Ch. 18 Ch. 18 Ch. 19	Ch. 17 due Ch. 18 due	Electric Fields & Potentials
Feb. 2 Feb. 4 Feb. 6	Ch. 19 Ch. 19, 20 Ch. 20	 Ch. 19 due	Ohm's Law
Feb. 9 Feb. 11 Feb. 13	Ch. 20 Ch. 20, 21 **REVIEW #1: Chs. 16-19**	No homework due this week	DC Circuits (with lightbulb dimmer)
Feb. 16 Feb. 18 Feb. 20	Ch. 21 Ch. 21 Ch. 21, 22	Ch. 20 due	Magnetic Forces and Currents
Feb. 23 Feb. 25 Feb. 27	Ch. 22 Ch. 22,23 Ch. 23	Ch. 21 due Ch. 22 due	Oscilloscopes and Meters
Mar. 2-6	No class (Spring Break!)		No lab
Mar. 9 Mar. 11 Mar. 13	Ch. 23 Ch. 23 Ch. 25	 Ch. 23 due	Magnetic Fields and Forces (e/m ratio)
Mar. 16 Mar. 18 Mar. 20	Ch. 24 Ch. 24 **REVIEW #2: Chs. 20-23**	Ch. 25 due	No lab

Mar. 23 Mar. 25 Mar. 27	Ch. 24 Ch. 24 Ch. 26	Ch. 24 due	Lenses and Mirrors
Mar. 30 Apr. 1 Apr. 3	Ch. 26 Ch. 26 Ch. 27	Ch. 26 due	Interference & Diffraction
Apr. 6 Apr. 8 Apr. 10	No class (Easter break!) Ch. 27 Ch. 27	No homework due this week	No lab
Apr. 13 Apr. 15 Apr. 17	Ch. 27 Ch. 28 Ch. 28	Ch. 27 due	Relativity
Apr. 20 Apr. 22 Apr. 24	Ch. 28 Ch. 30 **REVIEW #3: Chs. 24-27**	No homework due this week	Atomic Spectra
Apr. 27 Apr. 29 May 1	Ch. 30 Ch. 30 Ch. 31	Ch. 28 due Ch. 30 due	Nuclear Counting
May 4 May 6 May 8	Ch. 31 Ch. 31 and course wrap-up FINAL EXAMS BEGIN	No homework due this week	No lab

N.B.: The above outline is the intended schedule. Inevitably some minor adjustments may be necessary; however, I will give ample notice before any changes are made.