Physics 121 Syllabus Fall 2012 Hunter College

General Physics: Introduction to Electricity and Magnetism

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Lecture: Monday & Thursday 9:45 – 11:00 am Wednesday 9:10-10:00 am
Recitation: Wednesday 9:10-10:00 am

Office Hours: Monday 11:00 am-12:pm or by email appointment on other days/times

Textbook:
Fundamentals of Physics Volume 2, 9th Edition, by Halliday, Resnick, and Walker

Online resources at WileyPLUS :
(required – may be purchased as a bundle or separate from text)
http://edugen.wiley.com/edugen/class/cls275699

Academic integrity: *Hunter College regards acts of academic dishonesty (e.g., plagiarism, cheating on examinations, obtaining unfair advantage, and falsification of records and official documents) as serious offenses against the values of intellectual honesty. The college is committed to enforcing the CUNY Policy on Academic Integrity and will pursue cases of academic dishonesty according to the Hunter College Academic Integrity Procedures*

Course Description

The course will cover chapters 21-34 as listed in the table below.

There is tutoring available at the Physical Science Learning Center.

The goal of this course is to make you familiar, at the conceptual and basic problem- solving level, with the physics of electricity, magnetism, optics and modern physics.

The Web-based homework covers each week's material. This means you will have the background of reading the text and the experience of two lectures to guide you in finishing each weekly homework assignment. Homework problems are designed to test your understanding of the concepts as well as simple problem-solving skills. Each week you will be responsible for completing a computer-based homework assignment. This assignment is graded and is an integral part of the course. Each homework set must be completed by the time indicated.

Link: http://edugen.wiley.com/edugen/class/cls275699

Course Grade

There are two midterms and a cumulative final exam. The grading point distribution is described.

If you miss a midterm it counts as zero, there are no makeups! The exam questions are problem solving types.

Midterm 1 20%
Midterm 2 20%
Homework 10%
Lab 15%
Final 35%

Credit/No Credit Grading Option
You may choose to be graded in this course on a Credit/No Credit basis. Before selecting this option, check with your departmental advisor and be aware that many colleges, professional schools, and employers may look with disfavor on Credit/No Credit grades and may even convert "Credit" to "C" and "No Credit" to "F" for their purposes, as described in the Hunter Catalog. If you do select the Credit/No Credit option, you must complete all course assignments, including the final examination.

IMPORTANT! If you choose the Credit/No Credit option, you must do so by the last class, using the official college form (you can obtain it from the Registrar's Office). **Credit/No Credit requests will not be accepted after the final examination**.

LAB
The lab is an essential part of the course, and no grade is given without completion of the lab. If a student is repeating the course and has completed the lab in a preceding semester, it is not necessary to repeat the lab: the lab average from the preceding semester will be used in determining the course grade.

"In compliance with the American Disability Act of 1990 (ADA) and with Section 504 of the Rehabilitation Act of 1973, Hunter College is committed to ensuring educational parity and accommodations for all students with documented disabilities and/or medical conditions. It is recommended that all students with documented disabilities (Emotional, Medical, Physical and/ or Learning) consult the Office of AccessABILITY located in Room E1124 to secure necessary academic accommodations. For further information and assistance please call (212- 772- 4857)/TTY (212- 650- 3230)."

Topic	Reading
Syllabus, Introduction, Electric Charge, Coulomb's Law, Conservation of Charge	21.1-21.6
Field Lines, Dipoles, Fields from charge line	22.1-22.6
Fields from charge line, Point charge Dipoles in fields	22.7-22.9
Gauss' Law,	23.1-23.5
Applications of Gauss' Law	23.7-23.9
Electric Potential from fields, point charge	24.1-24.9
Calculating field from potential	24.10-24.12
Capacitance, Stored Energy and Dielectrics	25.1-25.8
Current, Resistance, Ohm's Law	26.1-26.9
Circuits, resistance, emf rules	27.4-27.6
Multi-loop circuits, RC circuits	27.7-27.9
EXAM 1 (chapters 21-27)	EXAM1
Magnetic fields	28.1-28.5
Magnetic Force	28.6-28.10
Current induced Magnetic fields, Ampere's Law,Coils	29.1-29.6
Faraday's Law, Lenz's Law	30.1-30.5
Induction and Inductance	30.6-30.12
LC oscillations	31.1-31.7
AC Circuits	31.8-31.11
Maxwell's Equations	32.1-32.5
EXAM 2 (chapters 28-33)	EXAM 2
EM Waves: Energy, polarization, refraction, reflection	Selections from Chap.33
Interference	Selections from Chap. 35
Diffraction	Selections from Chap. 36