

General Physics II
PHS 202-E
SPRING 2008

Instructor: Dr. Nate Magee

Phone: 609-771-3442

Email: magee@tcnj.edu

Office hours: in SC-P304 Tues and Wed. 10:30-12 pm and by appointment

Required Text: Fundamentals of Physics: *Halliday, Resnick, and Walker 7th ed. (Vol. 2 pkg)*

WileyPLUS will be required: <http://edugen.wiley.com/edugen/class/cls55629/>

Course web site: www.tcnj.edu/~magee

Meeting Time/Space:	Mon/Wed Lectures:	SC P 317	(5:00 -6:20 pm)
	Mon/Wed Labs	SC P 310	(6:30 -8:20 pm)

Course description: General Physics II is an introduction to electricity, magnetism, and optics. Emphasis in the course will be in applying the knowledge and formulas to real-world situations. In addition, many of the concepts, problem solving skills and modeling techniques we will learn are useful for everyday activities and situations. We will work through most of the material in each chapter in one week, spending a little extra time on important or difficult topics.

Course objectives: The objective of this course is to develop important analytical skills and to provide a strong foundation for further technical study. Mastery of the materials and skills that will be taught in this course will be fundamental to success in any engineering or technical discipline.

TOPICS

0.	Thermodynamics	Chapter 18-20
1.	Electric charge	Chapter 21
2.	Electric fields	Chapter 22
3.	Gauss' law	Chapter 23
4.	Electric potential	Chapter 24
5.	Current, resistance, and circuits	Chapter 26-27
6.	Magnetic fields and forces	Chapter 28-29
7.	Induction and inductance	Chapter 30
8.	Maxwell's equations	Chapter 32
9.	Electromagnetic waves	Chapter 33
10.	Images, interference, and diffraction	Chapter 34-36

COURSE STRUCTURE

Assignments: Reading and Problem Sets

Reading will be assigned to be completed prior to each class. Comprehension of this reading will be necessary to actively participate in class.

Problem sets will usually be assigned bi-weekly and will consist of questions and problems drawn from the text as well as other sources. Problem sets are generally due two weeks after they are issued. They will be graded and contribute significantly to your grade. They are not optional. We will reserve some time during class to work on problem-solving, but much of the work will need to be completed outside of class. The problem sets are an essential to your learning and should be done carefully.

Solutions to problem sets will need to be entered at Wiley plus website. Numerical values are not generally the same as those in the text. Late submissions will not be accepted without prior approval.

Exams: 2 tests and 1 comprehensive final exam

Two tests will be spaced evenly during the semester. The final exam will be comprehensive.

Labs:

A tentative calendar for our course will be available on the course web site. These labs will require teamwork, hands-on problem solving, and writing, and will be an important part of your course grade. The low lab grade of the semester will be dropped.

Classroom lectures and discussions:

The classroom time will be devoted to lectures, discussions, and problem solving that follow text material. Please do not hesitate to ask questions during class. Your active participation in the classroom is important for developing a positive learning experience for all students in the course.

Grading:

Grades will not be curved. Percentage grades will be converted directly to letter grades according to the following scale:

<i>Grade</i>	<i>Range</i> <i>(rounded to whole percent)</i>
A	93-100
A-	90-92
B+	88-89
B	83-87
B-	80-82
C+	77-79
C	73-76
C-	70-72
D	60-69
F	<60

Weighting of course components:

40% tests
25% final exam
10% problem sets
20% laboratory grade
5% classroom participation

Attendance:

Course attendance will be monitored closely and contribute to your participation grade. Please talk to me personally if expect to miss an upcoming class or lab.

Cancellation/School Closings:

If class should be canceled for any reason, any scheduled exams or due problem sets will be transferred to the first day we return to class.