

SYLLABUS: PHYSICS 212 (GENERAL PHYSICS II)

FALL 2007

Basic information

Class meetings: Lectures Tuesday, Thursday in Stolkin Auditorium
First section: 8:00 am - 9:20 am
Second section: 9:30 am - 10:50 am

Workshops Wed, Fri

Lab Separate course PHY 222

Lecturer: Joseph Schechter

E-mail schechte@phy.syr.edu

Office hours Tu, Th 11:20-12:20 (Room 315)

Phone: (315) 443 5968

Text R. L. Reese, University Physics, Vol. II

A small scientific calculator is desirable

Course description

Prerequisites: Having passed PHY 211 (or equivalent)

Basic knowledge of differential and integral calculus

Most emphasis will be placed on material in the following chapters of Reese:

- 16) Electric charges, electrical forces and the electric field.
- 17) Electrical potential energy and the electric potential.
- 18) Circuit elements, independent voltage sources and capacitors.
- 19) Electric current, resistance and dc circuit analysis.
- 20) Magnetic forces and the magnetic field.
- 21) Faraday's law of electromagnetic induction.
- 25) The special theory of relativity.

Roughly speaking, you should spend about two weeks studying the material in each of the above chapters. Selected material from Chapters 23 and 24 will also be covered. Needed background material often taught in PHY 211 will be included.

Course setup

You are required to attend all Lecture and Workshop sections; of course, you are also expected to do all assigned Readings and Homework Problems. Assignments for the following week will be given out at the Thursday lecture.

The homework problems should be handed in at the beginning of each workshop period. All homework will be checked for completeness and selected parts will be graded in detail. Late homework will not be accepted.

During the Workshop periods you will, among other activities, have the opportunity to work in small groups on Problems and Questions.

There will be 3 full period exams during the semester. Each exam will mainly focus on material from the 3 or 4 weeks prior to the day of the exam but may include earlier material as well. In addition there will be a two hour comprehensive final exam. All exams will be closed book but you are allowed to bring a "formula sheet" written on one side of a standard 8.5 in. by 11 in. piece of paper. There will be no makeup exams. Seating arrangements for the exams will be posted and labeled copies of the exam will be assigned individually.

Grading

1. The three exams during the term will count a total of 55%. The lowest grade of these three exams will be dropped.
2. The final exam will count 30%.
3. Homework and Workshop participation will count 15%.
4. The total score (sum of 1-3 above) may be curved. But you are guaranteed to get at least the following letter grades, A: 90-100, A-: 85-89, B+: 80-84, B: 75-79, B-: 70-74, C+: 65-69, C: 60-64, C-: 55-59, D: 50-54.

Test dates

Full period exams, all on Thursdays: Sept. 20, Oct. 18 and Nov. 15

Final exam:

8:00 section: Tuesday, Dec. 11, 7:15 – 9:15 pm

9:30 section: Wednesday, Dec. 12, 2:45 – 4:45 pm

Getting help

The lecturer and the workshop instructors will be happy to try to help you with any problems connected with the course. There is also the Physics Clinic (Room 113) which is open many hours each week. Mrs. Arlene Johnston, in the glass-walled office on the first floor (Room 111), is the Physics Department Undergraduate Secretary.

Note:

Some old exams will be made available at appropriate times.

Physics Library:

It is located at the East end of the second floor. It is a quiet place to study and contains the text on reserve as well as other reserve materials which may be provided.

