PHY132/134 Studio Section 90 Course Syllabus

Course Description

This is the second part of a two-semester physics sequence for physical-sciences or engineering majors. The course covers the fundamentals of electricity and magnetism – electrostatics, magnetostatics, induction, and finally electromagnetic waves. This takes approximately the first ten weeks of the course. The final four weeks of the course cover diffraction, interference, and geometrical optics.

Students taking this section of the course must also be enrolled in PHY134-R90 and PHY134-L90, the laboratory component of the course. This class meets three times a week on Mondays, Wednesdays, and Fridays, in Physics, P-118 from 10:00AM-11:53AM. The laboratory component will take place on Fridays.

Textbook and materials

The textbook for this course is: Debora Katz; Physics for Scientists and Engineers: Foundations and Connections, Advance Edition. Along with this we will be using the Webassign homework system connected with the book. The textbook and Webassign access are required.

You will also need a laboratory notebook.

A calculator will be essential for all exams. It can be any kind of scientific calculator, but not a phone, tablet or laptop computer. It cannot have any kind of networking or messaging capabilities. During class you may bring any device you wish, but you should make sure you gain familiarity with the calculator you will be using in exams.

Format of class

This course follows a participatory studio format. Students are expected to attend all classes for which they do not have a reasonable excuse and participate in group activities during the classes. In addition, students will be expected to prepare for every class by reading the relevant chapter in the textbook and answering some questions on Webassign BEFORE every class. These assignments are labelled “Pre Class”. During Monday and Wednesday Classes, we will cover the material in one chapter, using a blend of lecture, problem solving and demonstrations. For each of these classes there will be a Webassign assignment labelled “During Class”. You will work on these problems in groups in the classroom with the help of the professor and teaching assistants, and you can enter the answers you get to these problems either during or shortly after class (they will be due 24hrs after class). For each chapter there is one more set of problems to be completed after the class, labelled “Post Class”. These will be due one week after the class takes place.

The Friday class will be mostly dedicated to the labs, however there will be also be opportunities to ask for explanations on the weeks homework. It is necessary to prepare in advance for the labs. Every student should come to lab having read the lab manual and written up the procedure in their lab notebook. This will be checked off by the Teaching Assistants and form part of your score for the lab. At the end of the lab period, the Teaching Assistants will check your work before you leave, and their assessment of your work will form the other part of your score for the lab. You will be asked to write up 3 formal lab reports during the semester. Your scores on these, together with your scores on the weekly labs, will determine your grade for PHY134-L90.

Grading structure

The grades for PHY131 will be determined based on the following:

- Pre Class Webassign Problems: 5%
- During Class Webassign Problems: 5%
- Post Class Webassign Problems: 15%
- First Midterm Exam: 20%
- Second Midterm Exam: 20%
- Final Exam: 35%

Exams

There will be two midterm exams, held in class on **Friday 26 February** and **Friday 1st April**.

The final exam will be on **Thursday 12 May** from 2:15-5:00PM, following the "common exam PHY 121,122,132,142" time.

Class Schedule

Classes will be held on Mondays, Wednesdays, and Fridays from 10:00-11:53 in P118.

Disability Support Services (DSS)

If you have a physical, psychological, medical or learning disability that may impact your course work, please contact Disability Support Services, ECC (Educational Communications Center) Building, Room 128, (631) 632-6748. They will determine with you what accommodations, if any, are necessary and appropriate. All information and documentation is confidential.

Academic Integrity

Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Faculty are required to report any suspected instances of academic dishonesty to the Academic Judiciary. Faculty in the Health Sciences Center (School of Health Technology & Management, Nursing, Social Welfare, Dental Medicine) and School of Medicine are required to follow their school-specific procedures. For more comprehensive information on academic integrity, including categories of academic dishonesty, please refer to the academic judiciary website at http://www.stonybrook.edu/uaa/academicjudiciary/ [http://www.stonybrook.edu/uaa/academicjudiciary/]

Critical Incident Management

Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of Judicial Affairs any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn.