Physics 303 – Syllabus
Fall 2007

General Information

Professor: Dr. Josh Gladden

email: jgladden@olemiss.edu; Phone: 915-7428

Office: Kenon Observatory #1 and NCPA 1062

Office Hours in Kenon Obs.:

      Mon. (10:00 – 11:00)

      Thurs. (11:00 – 12:00), or by appointment at the NCPA

Website: www.phy.olemiss.edu/~jgladden/phys303/   (check regularly!)

Lecture: T Th 9:30 – 10:45 PM in Lewis 109

Required Text: Fundamentals of Physics 8th ed.,

      Halliday & Resnick   (Wiley & Sons 2008)

Course Description

This course is designed for students who have completed the Physics 213/214 algebra based courses and have decided to become Physics majors, which requires the calculus based Introductory sequence (221/222). In this one semester course we will revisit many of the topics covered in 213/214, but will now focus on the use of calculus to solve problems. The application of calculus allows for the analysis of more complex problems and phenomenon. The primary goal for the course is to prepare you with the mathematical tools required for the upper level physics courses.

We will apply differential and integral calculus to problems in one and two dimensional kinematics, work and energy, rotational kinematics, gravity, the Laws of Thermodynamics, Coulomb's Law, and Gauss' Law. There is some flexibility in the specific topics, so adjustments can be made according to the interests of the class. Some possibilities might include Fourier Series analysis of waves, solutions to simple ordinary differential equations, and computational tools for solving integrals.

Evaluation

Weights

Homework .. 15%

Test 1 .... 20%

Test 2 .... 20%

Test 3 .... 20%

Final Exam .. 25%

Homework: Homework will be assigned for each chapter we cover; announcements will be made in class and posted on the course website. Most assignments will come from end of chapter questions in our textbook. Homework must be easy to read; pages must be stapled together, and have smooth (not torn) edges. The grade will reflect content, presentation, and English. The lowest grade will be dropped.

(See note under **Group Work** below.)

Letter Grades

Typical letter grade break points are as follows:

A: 90% - 100%
B: 80% - 89%
C: 70% - 79%
D: 55% - 69%
F: < 55%
(subject to change)

Tests: There will be three midterm tests and a final exam, consisting of essay style questions, problems to be worked out, and multiple choice questions. Students will be allowed to use a calculator, but no books or notes during the tests.

Final Exam: A cumulative final exam will be given on Wednesday Dec. 5 from 8 – 11 AM. Details on the topics stressed and exam policies will be given later in the semester.

Course Policies

Absences

There is no attendance policy for the course, but keep in mind that you will be responsible for knowing what is said in class, and absences from tests count as zeros, unless they are justified. If you must be absent during a test for a University sponsored event, you MUST discuss this me before the test date. In the case of an unexpected emergency, you must make contact with me as soon as possible and have documentation.

Academic Integrity (Cheating)

Academic integrity is essential to all the values upon which the University is founded. Students must therefore embody academic honesty in all aspects of their work. A student with a documented case of plagiarism or academic cheating in a course will receive the grade of F for the course and may face disciplinary action by the University, including expulsion. You should know that I take this SERIOUSLY.

Group Work

Physics is very rarely done alone. I encourage you to form study groups in preparation for homework assignments and tests. HOWEVER, the homework assignments should be the work of the individual student. If you can not do the homework, you will not do well on the tests!

Changes

Any changes will be brought to your attention and posted on the web site.