FD'01

UNIVERSITY PHYSICS I

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PHYSICS 251
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COURSE DESCRIPTION: An introductory calculus-based course dealing with the principles and theories of the mechanics of particles, rigid bodies and fluids; wave motion; thermodynamics and kinetic theory, PHY 251 is an elective course in the liberal arts curriculum and a required course in all of the Engineering curriculum and some Bachelor of Science/Arts curriculum.

TEXTBOOK: PHYSICS FOR SCIENTIST AND ENGINEERS by R. Serway, Saunders College Publishing, 1996

MATERIALS AUXILIARY: A basic scientific calculator is required.

CONTENT AUXILIARY: Problems will be assigned and collected every Thursday. **Late assignments will not be accepted.**

TESTS: There will be three exams and a final exam. The coverage and tentative dates or the exams are listed below. Adjustments can be made depending on time constrains and student comprehension.

EXAM	TENTATIVE DATES	COVERAGE
1	SEPT. 18	Chapters 1 – 6(measurements, vectors, motion in one, two and three dimensions, forces)
2	OCT. 16	Chapters 7 - 9(work, energy, collisions)
3	NOV. 13	Chapters 10-15(rotational motion, equilibrium, gravitation, elasticity and fluids)
FINAL	DEC.	Chapters 16 - 22(oscillations, waves, heat, Laws of Thermodynamics)

EVALUATION: Homework will be assigned, collected and graded. Worked solutions to the assigned problems will then be posted so you can check your work prior to the exams.

A dual grade system will be employed in all the test in order to minimize difficulties that instructors experience when setting exams that give students meaningful grades – grades that are valid within the definitions of the letter grades as defined below. Normally, if a hard exam is set in order to make sure that better students gain a valid "A" grade, then students who are not working at the same level (at least in physics) would get "wiped out" and receive a poor grade.

The dual grade system works by using exams that contain double the number of questions that the students are required to answer. Half of the questions are fairly straightforward, and similar to those that have been discussed in class or assigned for homework. Answering these questions requires a good understanding of the concepts involved, but no greater analytical skills. Consistent correct answers to these questions can gain a student a "B" grade.

Correct answers to the remaining questions involve what could be regarded as "A" grade work – answering problems using a greater level of expertise on the part of the student, involving principles and techniques that have been introduced in class, but in situations that they have not seen before. Consistent performance at this level is awarded an "A" grade.

In any exam students can answer only half of the question, where these can be of either or both kinds. A student's final semester grade ultimately depends primarily on their cumulative point score.

Grades for the course will be determined by your performance in the homework problems, three long exams and the final exam. The weight for each item is as follows:

Three long exams	60 %
Final exam	25%
Homework	10%
Attendance	5%

Letter grades will be earned according to the following scale:

100 % - 89 %	A (Outstanding scholarship and an unusual degree of intellectual initiative)
88 % - 76 %	B (Superior work done in a consistent grasp of the subject matter)

75 % - 63%	C (Average grade indicating a competent grasp of subject matter)
62 % - 50 %	D (Inferior work of the lowest passing grade, is not satisfactory for fulfillment of prerequisite coursework)
Below 50%	F (Failed to grasp even the minimum subject matter, no credit given)
	I (Did not complete a small portion of the work or final examination due to circumstances beyond the student's control. The issuance of an "I" grade is not automatic. Prior to reporting of grades a contract must be made between the student and the instructor for completion of the course.)

Student's class standing will be available at any time.