PHYSICS 240 SYLLABUS
Spring 2009 Semester
Physics for Science and Engineering I
R.H. Flarsheim Hall 310, MTWR 8:00-8:50 a.m.

Instructor: Jerzy M. Wrobel, Ph.D.
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office hours: MR 09:00-10:00 or by appointment

Objectives: to develop abstract thinking; to enrich technical vocabulary; to learn to describe and analyze aspects of nature; to learn the basics of mechanics and thermodynamics


Material Outline: Kinematics and dynamics of a particle, a system of particles, a rigid body; and of an elastic medium; thermodynamics (chapters 1-22). The material in the book is mandatory whether it was presented during the lectures or not.

Homework: For each discussed chapter, students should solve all problems marked with a box. Additionally, there will be assignments for which the solutions have to be turned in for a grade. The solutions should be neatly prepared (one problem per page). Comments describing the physical situation in the problem and justification of the steps should be included along with the mathematical solution. Homework will be assigned each Monday. Homework is due before the next assignment is announced and will be collected before the lecture. (Late submissions will not be accepted.)

Quizzes: At the beginning of each lecture, there could be a short quiz (with probability of 0.5) concerning concepts and definitions. The quizzes will indicate to the students their progress in the subject. Each answer will be graded as follows: 1 - perfect (or very good), 0.7 - good idea with no major errors, 0.3 – vague idea with no significant errors, 0 - no answer or a major error in the answer.

Tests: There will be five tests during the semester (Jan 29, Feb. 19, Mar. 12, Apr. 9, and Apr. 29). There will always be one problem concerning concepts and definitions, and three problems (possibly with some modifications) from the book.

Exam: The comprehensive, final examination (Monday, May 4, 2008, at 8:00-10:00 a.m.) is optional. The result of the final examination cannot lower the grade earned by the student up to that point.

Grade Composition:
- five tests (at 10% each): 50%
- lab grade: 20%
- homework: 15%
- quizzes: 15%
- (optional final exam: 50%)

Grade Scale: A(–): 85% or higher
B(±): 70-85%
C(±): 55-70%
D(±): 40-55%
F(±): below 40%

Conduct: The students are obliged to behave in a manner compatible with the University's function as an educational institution. In all cases of academic dishonesty, an academic judgment will be made about the student's grade on that work and in that course. The alleged academic dishonesty will be reported to the Primary Administrative Officer.

Final Note: It is strongly advised that the book be read before the lecture and that doubts be clarified in class. The benefits from the lectures increase significantly when a student is prepared for class. The average student should spend approximately two hours studying outside class for one hour of lecture in order to learn the material.