

Syllabus
Physics 109
Introduction to Physics
Fall, 2007

Three credits

Prerequisites: none

Instructor: Loren Jacobson, Adjunct Prof.
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Course Designation: This course is considered an optional course.

Course Description: This course will introduce students to physics, an important area of study which will contribute significantly to whatever technical discipline becomes their major area of study. The conduct of this course will favor the “Hands On” approach, with two laboratory periods per week, and a classroom session in between. The classroom session will adopt the “Peer Instruction” method, in which class members assist one another in the learning process.

Readings, Materials, and Resources: The text will be “Physics for Scientists and Engineers” by Richard Wolfson and Jay Pasachoff, published by Addison Wesley. We will use the third edition and cover chapters 1 through 13, 15, and 16.

Course Content: The main emphasis of this course will be mechanics and kinematics, with an extensive treatment of Newton’s laws. Sound and wave phenomena will also be covered. The text does include a small amount of calculus, which should not be too challenging, and can easily be left out. The discussion of vectors, in the context of motion and force balance, will probably require that there be some review of trigonometry.

Course Goals: The purpose of this course will be to give those students who wish to enter the regular physics curriculum a basic introduction to the subject that will better prepare them for successful study of the more rigorous courses that will be taken later.

Attendance: it is expected that students will attend all of the laboratory sessions and the classroom session. Since laboratory experiments will be performed as teams, frequent absence will definitely have an adverse effect on team performance. Acceptable reasons for missing class will include illness, personal and family emergencies.

Grading: Grades will be based on the following factors:

Class participation	20%
Laboratory reports	20%
Homework	20%
Quizzes	20%
Final Exam	20%

This equal distribution of percentage may be modified later, if circumstances warrant, and with full disclosure to students.

The standard for letter grades will be as follows:

- A - 90% or above
- B - 89% to 80%
- C - 79% to 70%
- D - 69% to 60%
- F - 59% or below.

A grade of C or above in this class will exempt the student from the requirement to take Physics 121 Laboratory, with approval of the Physics Department Head.

Assessment: The Force Concept Inventory will be used at the beginning and end of the semester for assessment.

Pace of the Class: The class is expected to proceed at a pace that will insure that all of the students can reach a reasonable level of understanding of the concepts of mechanics and wave phenomena.

Getting Help: Students are strongly encouraged to work together. I will be available for help during specified office hours, after class meetings, and at other times by appointment. I strongly encourage informal drop-in visits to my office, and contact by e-mail.

Detailed calendar and reading and homework assignments will be found in separate documents available on the web site for the course. The URL for this web site is:

<http://infohost.nmt.edu/~ljacobso/phys109.html>