PHY 108
Introduction to Engineering/Physics

Course Description

Three semester hours, two hours lecture and two hours recitation per week. Introductory course on engineering/physics analysis with practice in analyzing and solving problems in physics and engineering. Includes use of computational devices and methods.

Number of Credit Hours: 3

Specific Course Requirements

Textbook Requirements

See current semester textbook list at http://www.physics.sfasu.edu/docs/books.pdf

Program Learning Outcomes

- The student will demonstrate proficiency in the basic and applied fields of physics.
- The student will develop effective written and oral communication skills, especially the ability to transmit complex technical information in a clear and concise manner.
- The student will be able to work effectively in groups or teams.

Student Learning Outcomes

By the end of the course, a successful student will be able to:

- Analyze and solve introductory physics and engineering problems.
- Communicate the analysis of problems in a professional manner.
- Work effectively in teams/groups.

Course Objectives

The course objectives are to develop basic introductory level problem solving skills in prospective engineers and physicists and to have students become familiar with Newton's laws and associated conservation principles. A cooperative problem solving approach is taken where students develop time management skills and teaming skills. This course along with analytic geometry will prepare the student for the rigors of the PHY 240 series.

Course Content

- Vectors - Addition and Subtraction and an Introduction to Unit Vectors
- Kinematics - Description of Rectilinear and Projectile Motions
- Kinetics - Newton's Laws of Motion, Momentum, Energy, Conservation Principles, and Rotational Motion