PHY 250
Engineering Statics

Course Description

The conditions of equilibrium are studied in the engineering context. (same as EGR 250.) This is a four semester hour course that meets three hours of lecture and three hours of lab per week.

Course Prerequisites

Calculus II (MTH 234)
Technical Physics I (PHY 241)

Specific Course Requirements

Textbook Requirements

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

Course Objectives

The main objective of this course in mechanics is to develop in the engineering/physics student the ability to analyze any problem in a simple and logical manner and to apply to its solution a few, well-understood, basic principles. A cooperative problem solving approach is taken where students develop time management skills and teaming skills

Student Learning Outcomes

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

- Demonstrate an advanced level knowledge and understanding of Newton's First Law and its application to engineering.
- Show quantitative and analytical skills necessary to solving physics/engineering problems.
- Exhibit effective written and oral communication skills in presentations of physics/engineering problems to one's peers.
- Work effectively as a member of a group.

Course Content

- Statics of Particles
- Equilibrium of Rigid Bodies
- Centroids and Centers of Gravity
- Analysis of Structures
- Forces in Beams and Cables
- Friction

Course Assessment

The course assessment may use any or all of the following evaluation tools: exam scores, classroom participation, homework average, quizzes, and team projects.