

Course Descriptions

Pre-Engineering

ENGR 2111 Engineering Mechanics I

Laboratory experience, which serves to combine the elements of theory and practice using open-ended problems and engineering design. Problem solving methods used in the study of Statics, and the application of computers for technical calculations, problem solving, data acquisition and processing.

Prerequisite: Concurrent enrollment in ENGR 2113 Statics.

ENGR 2113 Statics

Topics include: resultants of force systems, static equilibrium of rigid bodies, statics of structures, distributed forces, centroids, internal forces, friction and moment of inertia. Shear and moment diagrams. Prerequisites: PHYS 2014 Engineering Physics I and MATH 2145 Calculus I.

ENGR 2121 Engineering Mechanics II

Laboratory experience, which serves to combine the elements of theory and practice using open-ended problems and engineering design. Problem solving methods used in the study of Dynamics, and the application of computers for technical calculations, problem solving, data acquisition and processing.

Prerequisite: Concurrent enrollment in ENGR 2123 Dynamics.

ENGR 2123 Dynamics

Analyzing the kinematics and kinetics of particles, systems of particles and rigid bodies from a Newtonian viewpoint utilizing vector algebra and calculus. Also analyzing situations using the work-energy and impulse-momentum principles. Prerequisite: ENGR 2113 Statics.