

ENGINEERING SCIENCE (ENSC)

ENSC 2113 Statics

Prerequisites: MATH 2144 and either PHYS 1114 or PHYS 2014 with grade of "C" or better.

Description: Resultants of force systems, static equilibrium of rigid bodies, statics of structures, and fluid statics. Shear and moment diagrams.

Credit hours: 3

Contact hours: Lecture: 2 Other: 1

Levels: Undergraduate

Schedule types: Discussion, Combined lecture & discussion, Lecture

Department/School: Dean of Engineering

ENSC 2123 Elementary Dynamics

Prerequisites: ENSC 2113 with a grade of "C" or better.

Description: Kinematics and kinetics of particles, systems of particles, and rigid bodies from a Newtonian viewpoint using vector algebra and calculus. Work-energy and impulse-momentum principles. Planar and three-dimensional kinetics and kinematics of rigid bodies.

Credit hours: 3

Contact hours: Lecture: 2 Other: 1

Levels: Undergraduate

Schedule types: Discussion, Combined lecture & discussion, Lecture

Department/School: Dean of Engineering

ENSC 2143 Strength of Materials

Prerequisites: ENSC 2113 with grade of "C" or better.

Description: Bending moments, deformation and displacement in elastic and plastic deformable bodies. Axial, torsional and shear loads. Buckling stress transformations and combined loads.

Credit hours: 3

Contact hours: Lecture: 2 Other: 1

Levels: Undergraduate

Schedule types: Discussion, Combined lecture & discussion, Lecture

Department/School: Dean of Engineering

ENSC 2213 Thermodynamics

Prerequisites: A grade of "C" or better in CHEM 1314, CHEM 1414 or CHEM 1515, MATH 2144, PHYS 2014.

Description: Properties of substances and principles governing changes in form of energy. First and second laws.

Credit hours: 3

Contact hours: Lecture: 2 Other: 1

Levels: Undergraduate

Schedule types: Discussion, Combined lecture & discussion, Lecture

Department/School: Dean of Engineering

ENSC 2613 Introduction to Electrical Science

Prerequisites: MATH 2153 and PHYS 2114.

Description: Elements of electrical engineering; AC and DC circuits, mesh and node formulation of network equations, steady-state response to sinusoids, energy, power and power factor.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Undergraduate

Schedule types: Lecture

Department/School: Dean of Engineering

ENSC 3213 Computer Based Systems in Engineering

Prerequisites: CS 1113 or ENGR 1412 and sophomore or higher standing.

Description: A comprehensive introduction to technology and application of microprocessors, concepts of computer and computation, interfacing and communication, data acquisition and representation. Applications of general-purpose and embedded processors in various disciplines of engineering and engineering problem solving.

Credit hours: 3

Contact hours: Lecture: 2 Lab: 2

Levels: Undergraduate

Schedule types: Lab, Lecture, Combined lecture and lab

Department/School: Dean of Engineering

ENSC 3233 Fluid Mechanics

Prerequisites: ENSC 2113 and MATH 2153 with a grade of "C" or better.

Description: The study of fluid properties, statics, conservation equations, dimensional analysis and similitude, viscous flow in ducts, inviscid flow, boundary layer theory, open channel flow, turbomachinery and fluid measurement techniques.

Credit hours: 3

Contact hours: Lecture: 2 Other: 1

Levels: Undergraduate

Schedule types: Discussion, Combined lecture & discussion, Lecture

Department/School: Dean of Engineering

ENSC 3313 Materials Science

Prerequisites: CHEM 1314 or CHEM 1414 or CHEM 1515.

Description: Introductory level. Relationship between structure and properties of materials and engineering applications. Atomic, microscopic and macroscopic properties.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Undergraduate

Schedule types: Lecture

Department/School: Dean of Engineering