EGEN - General Engineering

EGEN 201. Engineering Mechanics—Statics. 3 Credits. (3 Lec) F,S,Su On Demand.
PREREQUISITE: PHSX 220 or PHSX 240. COREQUISITE: M 273Q or M 283Q. Equilibrium of particles and rigid bodies; static analysis of structures including trusses, beams, frames and machines; coulomb friction; area and mass centroids, moments and products of inertia.

EGEN 310R. Multidisciplinary Engineering Design. 3 Credits. (Lec) F,S
PREREQUISITE: Junior standing in an Engineering curriculum or consent of instructor. Introduces engineering students to topics such as design process, creative design, project management, teamwork, and technical leadership while highlighting the skills needed to work in a multi-disciplinary environment.

PREREQUISITE: EGEN 201 or EGEN 221 and M 273Q or M 283Q. Kinematics, kinetics, work-energy, and impulse-momentum for particles and rigid bodies. Common Exams.

EGEN 203. Applied Mechanics. 3 Credits. (3 Lec) F,S,Su On Demand.
PREREQUISITE: PHSX 205 or PHSX 220 or PHSX 240. COREQUISITE: M 166Q or M 172Q or M 182Q. Force systems in equilibrium and applications to structural trusses and frames; section properties; distributed force systems; shear and moment distributions in beams; basic particle dynamics.

EGEN 205. Mechanics of Materials. 3 Credits. (3 Lec) F,S,Su On Demand
PREREQUISITE: EGEN 201 or EGEN 221. Stress and strain, Hooke's Law, thermal strain, torsion, bending of beams, combined stress, limit analysis, energy methods, virtual work, column theory.

EGEN 325. Engineering Economic Analysis. 3 Credits. (3 Lec) S
PREREQUISITE: Junior standing, M 171Q or M 165Q, or instructor approval. Methods for comparing and evaluating capital investment alternatives. Concepts include the time value of money, rates of return, cash flows, incremental analysis, depreciation, influences of taxes, inflation and deflation, depreciation, replacement analysis. Emphasis is placed upon evaluating various engineering alternatives. Some open-ended design problems are included.

EGEN 330. Business Fundamentals for Technical Professionals. 3 Credits. (3 Lec) F,S,Su
PREREQUISITES: Junior Standing; and M 171Q or M 165Q. Basic business topics for engineers and other technical professionals. Introduces key topics related to financial statements, accounting practices, project management, and evaluation of capital investment alternatives including present worth, rate of return, and after-tax analysis methods.

EGEN 335. Fluid Mechanics. 3 Credits. (3 Lec) F,S,Su On Demand.
PREREQUISITE: EGEN 202, EGEN 205. Introduction to modern fluid mechanics.

EGEN 350. Applied Engineering Data Analysis. 2 Credits. (2 Lec) F,S,Su
PREREQUISITE: M 166Q or M 172Q. An overview of data variability and applied statistical analysis techniques for a broad range of engineering disciplines. Topics include fundamentals of probability, essential probability distributions, hypothesis testing, experimental design strategies, and regression in the context of engineering applications. Evening exams required. Common final.
Font Notice

This document should contain certain fonts with restrictive licenses. For this draft, substitutions were made using less legally restrictive fonts. Specifically:

Times was used instead of Adobe Garamond Pro.

The editor may contact Leepfrog for a draft with the correct fonts in place.