

# EGN: ENGINEERING: GENERAL

## Courses

	Credit(s)	Contact	Lab
EGN 1007C. ENGINEERING CONCEPTS & METHODS. ENGINEERING CONCEPTS & METHODS Prerequisite: MAC 1105 or higher Introduction to computer software applications involving spreadsheets (Excel), and procedural programming (MATLAB) in order to solve a variety of engineering related problems. (Special Fee: \$39.00).	1	1	2
EGN 2312. ENGINEERING ANALYSIS-STATICS. ENGINEERING ANALYSIS-STATICS Prerequisites: Minimum grade of C in both MAC 2311 and PHY 2048C. Prerequisite or Corequisite: MAC 2312. Fundamental concepts of mechanics, including resultants of force systems, free-body diagrams, equilibrium of rigid bodies, and analysis of structures.	3	3	0
EGN 2322. ENGINEERING ANALYSIS-DYNAMICS. ENGINEERING ANALYSIS-DYNAMICS Prerequisite: Minimum grades of C in EGN 2312 and MAC 2313 Prerequisite or Corequisite: MAP 2302 Kinematics and kinetics of particles and rigid bodies; mass and acceleration, work and energy, impulse and momentum; coordinate transformation and differential equation formulation of 3D motion; flywheel and balancing of rotating machines.	3	3	0
EGN 2332. MECHANICS OF MATERIAL. MECHANICS OF MATERIAL Prerequisite: EGN 2312 Corequisite: MAP 2302 Concepts of stress, strain, strength, deflection of axial force members, shafts in torsion, beams in flexure, combined stress, stability of columns, and design of simple elements.	3	3	0
EGN 2440. PROBABILITY AND STATISTICS FOR ENGINEERS. PROBABILITY AND STATISTICS FOR ENGINEERS Prerequisite: Minimum grade of C in MAC 2312. Axioms of probability, combinatorial and geometrical probability; probability distributions; measures of location and dispersion; sampling and sampling distributions; estimations and tests of hypotheses; engineering applications.	3	3	0
EGN 2930. SELECTED TOPICS IN ENGINEERING. SELECTED TOPICS IN ENGINEERING Selected topics in engineering based on the needs and areas of interest of the class and professor. May include laboratory and/or field work as part of the class. Multiple credit course. May be repeated for a maximum of 3 credits, but grade forgiveness cannot be applied.	1-4	variable	
EGN 3428. ENGINEERING MATHEMATICAL ANALYSIS. ENGINEERING MATHEMATICAL ANALYSIS Prerequisite: Minimum grade of C in MAC 2312 Advanced mathematical concepts and methods needed to solve engineering and engineering technology problems. Topics include First- and higher-order differential equations, Laplace transforms, linear algebra, and matrix analysis, Fourier series and transforms, Complex numbers, variables, and functions.	4	4	0

EGN 3443. PROBABILITY AND STATISTICS FOR ENGINEERING TECHNOLOGY. 3 3 0

PROBABILITY AND STATISTICS FOR ENGINEERING TECHNOLOGY Prerequisite: Minimum grade of C in MAC 2312 This course encompasses topics of statistical methods and probability theory important for engineering technology students. Topics include organization and description of data, axioms and theorems of probability, conditional probability, probability distributions, Poisson processes, probability density functions, statistics of populations and samples, estimation, test of hypotheses, regression analysis as applied to Engineering Technology. A minimum grade of C is required if used to satisfy Electrical and Computer Engineering Technology, B.S. degree requirement.