ENGINEERING EGR

EGR 111 Introduction to Engineering Design **3 Credits**
This first course is an introduction to the field of engineering. Students are introduced to engineering analysis and design through projects in robotics. The students will gain an overview of the various engineering fields and will be instructed in professional ethics and etiquette.
Offered: fall.

EGR 207 Engineering Statics **3 Credits**
Students study forces and torques on rigid bodies, couples, moments, centroids and moments of inertia. They consider equilibrium conditions, friction, free body diagrams, applications to beams, trusses, frames, and other structures.
Prerequisite: PHY 223 & MAT 112.
Offered: fall.

EGR 208 Engineering Dynamics **3 Credits**
Students learn about the kinematics of particles and rigid objects. Topics include D'Alembert's Principle, moving reference frames, work-energy methods, impulse, and momentum vibration with applications to engineering problems.
Prerequisite: EGR 207.
Offered: spring.

EGR 211 Engineering Thermodynamics **3 Credits**
Students learn the fundamental concepts and laws of thermodynamics, equilibrium with applications to physical and chemical systems.
Prerequisite: PHY 223.
Offered: fall.

EGR 214 Strength of Materials **3 Credits**
Students investigate the behavior of materials under mechanical loading. The topics include stress and strain relationships, shear, bending moments, torsion, deflection, beams, columns, energy methods, and failure criteria.
Prerequisite: EGR 207.
Offered: spring.