

ENGINEERING (ENGR)

ENGR 203 Engineering Modeling & Design 3.00

An introduction to design tools and practices associated with the design and development of engineering systems. Students will gain experience with solid modeling tools, including part modeling, assembly modeling and the reading and creation of layout drawings. Concurrently, the course will discuss the design process as students work through a semester long project. Each team will work on a specific component of a larger industry or community-based project. Work by smaller teams requires coordination, and communication. This course provides experience with collaboration, leadership, and project management. In addition, this course helps the next generation of engineers by supporting an entrepreneurial mindset which is essential to succeed in today's rapidly changing and highly complex world. Components: Laboratory, Class

Prerequisites:

Prerequisite for ENGR 203 is MATH 113 or MATH 115, with a grade of C- or higher

Typically Offered:

- Online: Spring

ENGR 213 Engineering Mechanics-Statics 3.00

Composition, resolution and equilibrium of forces and force systems; analysis of structures; friction; centroids; moment of inertia.

Prerequisites:

Prerequisite for ENGR 213 is completion of MATH 240 with a C- or higher. PHYS 201 is recommended.

Typically Offered:

- Online: Fall & Spring

ENGR 223 Engineering Mechanics-Dynamics 3.00

Kinematics and kinetics of particles and rigid bodies in translation; rotation and general plane motion; Newton's law, work-energy and impulse methods; linear and angular momentum; impacts; systems of particles and introduction to 3-D kinetics.

Prerequisites:

Prerequisite for ENGR 223 is completion with a C- or higher in ENGR 213, and PHYS 201, and MATH 241

Typically Offered:

- Online: Spring

ENGR 282 Engineering Economy 2.00

Application of principles of economic analysis to engineering decision making; time value of money; uniform annual cost; present worth; rate of return; benefit-cost ratio; depreciation; income taxes; inflation.

Prerequisites:

Sophomore Standing

Typically Offered:

- Online: Fall