

# ENGINEERING (ENGR)

**ENGR 120 Introduction to Engineering**

(3 Credits, Fall/Spring)

This course covers the history of engineering, engineering disciplines, ethics, statistics, graphing, and problem solving. PRE/COREQ: MATH 144 or MATH 147, or PERM/INST. (3 lecture hours, 0 lab hours, 3 credits)

**ENGR 210 Engineering Mechanics: Statics**

(3 Credits, Varies)

This first course in engineering mechanics addresses addition and resolution of forces, vector algebra, graphical methods, equilibrium, free body diagrams, trusses, frames, friction, centroids and moments of inertia, and fluid statics. PREREQ: MATH 170 and PHYS 211. (3 lecture hours, 0 lab hours, 3 credits)

**ENGR 220 Engineering Mechanics: Dynamics**

(3 Credits, Varies)

This second course in engineering mechanics covers particle and rigid body kinematics and kinetics, work/energy, impulse/momentum concepts, and combined scalar/vector approach. PREREQ: ENGR 210. (3 lecture hours, 0 lab hours, 3 credits)

**ENGR 240 Introduction to Electrical Circuits**

(3 Credits, Varies)

This course is an introduction to the world of electric circuits. Topics to be discussed include fundamental laws, basic network analysis, circuit theorems, capacitors, inductors, operational-amplifier circuits, first- and second-order circuits, and a sinusoidal steady-state analysis of AC circuits. This course also includes an introduction to computer-aided circuit simulation. PRE/COREQ: ENGR 120, PHYS 212, and PHYS 212L. (3 lecture hours, 0 lab hours, 3 credits)

**ENGR 290 Engineering Capstone**

(2 Credits, Varies)

This capstone course is the culmination of the study of Engineering or Computer Science at CWI. The primary objective is to further develop students' ability to conduct research through the practical application of engineering methods. Students will synthesize their knowledge of engineering and/or computer science with an individual or group research project and presentation. Students should take this course in their final semester. PREREQ: PERM/INST. (1 lecture hours, 2 lab hours, 2 credits)

Refer to [How to Read Course Descriptions](#) for an explanation of elements found in the course descriptions above.