

MEC - MECHANICAL DESIGN/ CAD

MEC 105 **3 credit hours (lecture: 3 | lab: 0)**

Processes and Materials

Course covers properties of materials including plastics and decomposites, ceramics, and metals. Processes discussed include molding, machining, forming and joining operations. Non-traditional methods such as EDM, stereolithography, and abrasive cutting are presented. Course may include plant tours.

Delivery mode: Face-to-Face | Online

MEC 210 **4 credit hours (lecture: 3 | lab: 2)**

Computer Integrated Manufacturing

Course provides overview of hardware, software and procedures involved in computer design and manufacturing. Content includes hardware and fundamentals of CAD, programmable controllers, NC programming, robotics technology, inventory management and computer-integrated manufacturing.

Delivery mode: Face-to-Face

Fee: \$50

MEC 220 **3 credit hours (lecture: 3 | lab: 0)**

Elements of Machine Design

Course examines design of machine elements as affected by material properties, loading conditions, stresses, deformation and costs. Content includes failure analysis, shafts and couplings, clutches and brakes, mechanical fasteners and springs.

Delivery mode: Face-to-Face | Online

MEC 230 **3 credit hours (lecture: 3 | lab: 0)**

Statics and Strength of Materials

Course covers concepts of statics and strength of materials. Content includes forces, force components, trusses, centroids, equilibrium, stress and strain, deflection of beams, torsion, and various types of joints.

Recommended: MAT 114 or higher-level MAT course.

Delivery mode: Face-to-Face | Online