MET 1400: Welding & Fabrication for Engineers

2 Credit Hours

Concurrent: MET 1001L

This course is an introduction to the use and operation of selected welding and fabrication processes. Weld joints and weld types are discussed as they relate to weld design. Weld evaluation and testing methods are covered. Laboratory projects emphasize safety and apply selected welding processes, various inspection processes, fixturing and engineering materials.

MET 1800: CNC Programming and Machining I

2 Credit Hours

Prerequisite: EDG 1211

This course is an introduction to the use and operation of selected CNC machines to include mills and lathes with the usage of precision measuring instruments. Laboratory projects emphasize safety, tooling identification, work holding setup, engineering materials, and manual programming with an introduction to CAM programming for CNC operations.

MET 2124: Statics with Applications

3 Credit Hours

Prerequisite: (MATH 1190 or (MATH 1179 and MATH 1189)) and (PHYS 1111 and PHYS 1111L) or (PHYS 2211 and PHYS 2211L)

2D and 3D forces and moments acting on components, machine parts, frames, and structures are analyzed. Static rigid body force systems in equilibrium, including friction applications are included. Distributed load calculations using centroids and centers of gravity located by composite and CAD methods are practiced. An introduction to calculating the moments of inertia of machines and structures is also included. Real 2D and 3D design applications are emphasized. Assumptions considering safety, economics, quality and function are discussed. Not equivalent to ENGR 2214,

MET 2290: Special Topics for MET

1-3 Credit Hours

Prerequisite: Consent of the Department Chair

Special topics selected by the program. Offered on a demand basis.