EDG 3112: Advanced Engineering Graphics

3 Credit Hours

Prerequisite: MET majors or department approval, and EDG 1212

This course covers advanced 3D CAD features and solid modeling techniques including patterning, configurations, library features, sketch blocks, advanced assemblies, and multi-body parts. Students who complete this course are eligible for the SolidWorks CSWP exam.

EDG 4111: Surface Modeling

3 Credit Hours

Prerequisite: MET majors or department approval, and EDG 1211

This course covers surface modeling in 3D CAD, combining surface modeling, solid modeling and creating master models. The student is introduced to complex solid modeling, free form surface modeling and surface analysis. Splines, curves and three-dimensional sketches are used in conjunction with surfacing techniques to create shapes common to the automotive or aircraft industry. The shapes are analyzed for surface continuity to optimize designs.

EDG 4222: CAD Customization and Standards

3 Credit Hours

Prerequisite: MET majors and or department approval, EDG 1212

This course covers topics in customizing CAD software and creating company standards. Topics include identifying company requirements, customizing the user interface, and writing company standards for the use of the software.

EDG 4224: Engineering Design Graphics for Custom Manufacturing

3 Credit Hours

Prerequisite: EDG 1212, MET 1400, and MET 1800

Advanced manufacturing specific CAD skills are emphasized including top-down design, weldments, sheet metal, custom properties, BOMs, custom drawing formats/layouts, and ASME Y14.5 compliant drawing creation. Students will design, document for manufacturing, and complete hands-on manufacturing analysis/exercises during the lab component of the class--gaining an understanding and mastery of manufacturing processes and manufacturing-ready documentation creation.