MANUFACTURING ENGINEERING TECH (EGMT)

EGMT 142 Overview Solid Model Technique 2 Credit Hours (1,2)
This course will cover an application of solid modeling software techniques to create parts and assemblies. Topics covered include creating sketches; creating parts with extrude, resolve, blend, and sweep; creating part features with round, chamfer, pattern, mirror; use of the part history tree; dimensioning of parts; building of assemblies; creation of parts from 2D drawings; creating 2D drawings from solid models of parts and assemblies; and an introduction to animation of assemblies.
Prerequisite(s): Previous CAD course and Permission of Instructor

EGMT 216 CAM with CNC Applications 3 Credit Hours (2,3)
Writing CNC programs in machine codes, and the setup and trial runs to produce parts from these programs. Simulation of CNC machining processes to predict tool paths and cycle times. Computer-aided manufacturing (CAM) topics and applications of CAM software will also be covered.
Prerequisite(s): EGME110, EGME141, MATH131

EGMT 225 Statics, Strength of Materials 4 Credit Hours (4,0)
Fundamental concepts of statics and strength of materials. Solutions of problems introducing forces, moments, normal stress, shear stress, bending stress and torsional stress. Theory and application of strain gages.
Prerequisite(s): MATH111 and MATH131 each with a C or better and PHYS221

EGMT 332 Thermodynamics & Heat Tran Tec 4 Credit Hours (4,0)
This course provides an algebra-based coverage of topics in thermodynamics and heat transfer relevant to technologists in manufacturing and fire science. Thermodynamics topics include properties of substances, energy balances, combustion and thermochemistry, and heating and ventilation systems. Basic principles of conduction, convection, and radiation, and their application to practical problems, are covered in the heat transfer portion of the course.
Prerequisite(s): MATH111 or MATH140