MANUFACTURING TECHNOLOGY (EGMF)

EGMF 110 Introduction to Machining I 4 Credit Hours
Students will receive instructions on shop safety, blueprint reading, measuring instruments, layout principles, and basic bench work. They will also receive instructions on grinding, lathes, drill presses, saws, and basic milling. Some metallurgical concepts are introduced. The course will make use of the Machinery's Handbook and apply the principles, concepts, and data in the handbook to industrially related projects. Information from the handbook will be used to ensure proper set-up and operation of the machinery. Students will spend several hours each week setting up, working, and familiarizing themselves with the machines. (2,6)4

EGMF 130 Introduction to Machining II 4 Credit Hours
This course builds upon the material presented in EGMF110. Students will receive additional instruction on shop safety and measuring techniques relative to the machinery introduced in this course. Additional topics on vertical and horizontal milling machines, surface grinders, metallurgy, and blueprint reading are covered. The Machinery's Handbook will continue to be used in conjunction with the machines utilized in this course. Students will spend several hours each week setting up, working, and familiarizing themselves with the machines. (2,6)4
Prerequisite(s): EGMF110

EGMF 210 Advanced Machining 4 Credit Hours
In this course students will write CNC programs in machine codes, and then set up and run CNC machines to produce parts from these programs. Computer software interfacing between programming languages and various industrial machines will be stressed. Computer-aided manufacturing (CAM) topics and applications of CAM software will also be covered. Students will be able to describe the sequence of operations for a part program, determine tools required for machining, calculate speeds and feeds, set up tooling on CNC machines, develop CNC programs using standardized formats, and use CAM software to produce three dimensional parts. (2,6)4
Prerequisite(s): MATH102 and (EGMF110 or EGME110)
Pre or Corequisite(s): EGMF130