ADVANCED MANUFACTURING TECH (ADMT)

ADMT 50   3 units
Advanced Manufacturing, Introduction
36 hours lecture, 72 hours laboratory
Grading: letter grade or pass/no pass.
Formerly MACHT 50. Introduction to the basic principles and operation of machine tools with a focus on bench operations, drilling, mills, lathes, and grinding machines, with a focus on computer automated machine tools. Standard industry practices and tool set-ups will be emphasized and applied.
Transferable to CSU Only

ADMT 200   3 units
Advanced Manufacturing Math
54 hours lecture
Grading: letter grade or pass/no pass.
Formerly MACHT 201. This course covers the study of machine shop problems involving the solution of formulas related to screw threads, feeds and speeds, spur gears, simple and angular indexing. Geometric figures, angles, triangles, circles, arcs, trigonometric functions, compound angles and oblique triangles will also be introduced.

ADMT 251   2 units
Advanced Manufacturing, CNC Mills/Lathes
18 hours lecture, 54 hours laboratory
Prerequisite: ADMT 50.
Grading: letter grade or pass/no pass.
Formerly MACHT 203. This course covers Computer Aided Manufacturing (CAM), emphasizing interactive graphics programming for Computer Numerical Control (CNC) machines. Concepts studied will include interactive geometry construction, tool motion, machine functions, repetitive programming, graphic output and graphic editing. Students will process programs using interactive graphics computer systems.

ADMT 252   2 units
Advanced Manufacturing, Sheet Metal CNC
18 hours lecture, 54 hours laboratory
Grading: letter grade.
This course covers the study of Computer Numerical Control (CNC) programming with emphasis on programming to support CNC machinery supporting the sheet metal industry. These machines include punch press, brakes, laser cutters and plasma cutters and pipe benders.

ADMT 253   2 units
Advanced Manufacturing, Capstone
18 hours lecture, 54 hours laboratory
Grading: letter grade or pass/no pass.
Formerly MACHT 204. This course covers Computer Aided Manufacturing (CAM), emphasizing interactive graphics programming for Computer Numerical Control (CNC) machines. Students will utilize various techniques of creating geometry on multiple work planes, three dimensional (3- D) surface tool path creation and manipulation, implementing 4th and 5th axis machining, generating surface to surface intersections, creating blends between surfaces, creating roughing operations for 3D, and CAD data conversion for the purpose of 3D machining.