MACHINE TECHNOLOGY (MACH)

MACH A030N **54 Hours (54 lecture hours)**
Introduction to Computerized Numerical Control and Manual Programming Noncredit
Advisory: MACH A105 and MACH A110 or instructor permission.
Grading Mode: P/NP/SP Noncredit, Letter Noncredit
Transfer Credit:
Not Transferable.
This noncredit course provides students with foundational knowledge and hands-on experience in Computerized Numerical Control (CNC) systems, an essential skill area for entry-level positions in advanced manufacturing and machining. Types of control systems, capabilities and the different machine languages are examined. Some machine shop background recommended. Elementary parts programming in two-axis systems, including all steps necessary to complete a part on both CNC lathes and mills.

MACH A033N **72 Hours (45 lecture hours; 27 lab hours)**
Computerized Numerical Control Programming-Mastercam 1 Noncredit
Advisory: CHT A100, CIS A100, or MACH A130, or MACH A030N, or instructor permission.
Grading Mode: P/NP/SP Noncredit, Letter Noncredit
Transfer Credit:
Not Transferable.
In this noncredit course, students will receive hands-on training in the use of Mastercam Computerized Numerical Control (CNC) programming software. The basics of two-dimensional part programming, including geometry development, milling, drilling, tapping, pocketing, and more will be explored.

MACH A034N **72 Hours (45 lecture hours; 27 lab hours)**
Computer Numerical Control (CNC) Programming-Mastercam 2 Noncredit
Prerequisite(s): MACH A033N or MACH A133.
Grading Mode: P/NP/SP Noncredit, Letter Noncredit
Transfer Credit:
Not Transferable.
This noncredit course provides advanced Computer Numerical Control (CNC) programming instruction using Mastercam to create programs for CNC machines. Instruction emphasizes complex cutter movement and surfacing.