



Course title: Computer Numerical Control I

Course number: MFG 168

Credits: 3

Catalogue description: First course in Computer Numerical Controlled programming. This is the study of CNC programming for Vertical Machining Center and the CNC Lathe. Topics include introduction to Cartesian coordinate system, programming parts, canned drilling cycles, circular interpolation, cutter compensation, setup and tooling.

Course Objectives: At conclusion of this course students will be able to...

1. Establish Points of Origin
2. Set Tool Length Offsets
3. Safely operate a CNC Vertical Machining Center and CNC Lathe
4. Program parts for a 2 axis CNC Lathe
5. Program parts for a 3 axis CNC VMC
6. Program canned drilling cycles
7. Program circular interpolation
8. Program cutter compensation
9. Program Fanuc Controlled VMC and Lathe

Course content:

1. Programming a CNC Vertical Machining Center
2. Circular Interpolation in X-Y plane
3. Drilling and Tapping canned cycles
4. Cutter diameter compensation
5. Programming a CNC Lathe
6. Create Path Profile