MACH 2634: CNC Machining Operations I

A. COURSE DESCRIPTION

Credits: 4
Lecture Hours/Week: 0
Lab Hours/Week: 8
OJT Hours/Week: *.*

Prerequisites:
This course requires all five of these prerequisites
  MACH 1625 - Blueprint Reading/Geometric Tolerancing II (Number of Years Valid: 5)
  MACH 1626 - Turning II (Number of Years Valid: 5)
  MACH 1627 - Milling II (Number of Years Valid: 5)
  MACH 1628 - Grinding II (Number of Years Valid: 5)
  MACH 1629 - Machine Tool Theory II (Number of Years Valid: 5)

Corequisites: None
MnTC Goals: None

The learner receives basic training on setup and operation of Computer Numerical Control (CNC) machining centers. The learner develops process plans and troubleshoots machining problems along with inspection procedures and reports. This course emphasizes hands-on experience. Prerequisite: First year of Machine Tool Technology program. Corequisite: MACH2510, MACH2630, and MACH2631.

B. COURSE EFFECTIVE DATES: 12/12/1997 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Demonstrate proper shop safety techniques using CNC machine tools.
2. Learn how to use CNC mill control for NC programming.
3. Learn how to use CNC mill control for conversational programming.
4. Learn proper tool selection for CNC mill.
5. Learn proper machine offsets for CNC mill.
6. Learn how to use CNC lathe control for NC programming.
7. Learn proper tool selection for CNC lathe.
8. Learn proper machine offsets for CNC lathe.
9. Identify proper tool holders for CNC machining methods.

D. LEARNING OUTCOMES (General)

1. The learner will demonstrate knowledge in setup of CNC Machining Centers
2. The learner will demonstrate knowledge in tool selection for CNC Machining Centers.
3. The learner will demonstrate knowledge in tool selection for CNC Turning Centers.
4. The learner will demonstrate knowledge in adjusting CNC offsets.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None
F. LEARNER OUTCOMES ASSESSMENT
   As noted on course syllabus

G. SPECIAL INFORMATION
   None noted