Alexandria Technical and Community College

MACH 2631: Machine Tool Operations I

A. COURSE DESCRIPTION

Credits: 3
Lecture Hours/Week: *.*
Lab Hours/Week: 6
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

This shop class involves precision training on the setup and operation of the engine lathe, milling machines, surface grinders, and various other pieces of shop equipment. Prerequisite: First year of Machine Tool Technology program. Corequisite: MACH2510, MACH2630, and MACH2634.

B. COURSE EFFECTIVE DATES: 08/30/2004 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Demonstrate proper shop safety using machine shop equipment.
5. Develop fixturing methods for different machining applications.
6. Display effective problem solving skills.
7. Employ proper speeds and feeds on machine tools using different types of materials.
8. NC files management.

D. LEARNING OUTCOMES (General)

1. The learner will demonstrate knowledge in setup of manual machine tools.
2. The learner will demonstrate knowledge in tool selection for an engine lathe.
3. The learner will demonstrate knowledge in tool selection for manual lathes.
4. The learner will demonstrate knowledge in the machining of heat treated material.

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

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted