Alexandria Technical and Community College

MACH 2523: Introduction to Computer Aided Manufacturing

A. COURSE DESCRIPTION

Credits: 3  
Lecture Hours/Week: 1  
Lab Hours/Week: 4  
OJT Hours/Week: *.*  

Prerequisites: 
This course requires the following prerequisite  
MACH 1502 - Basic Machining Processes (Number of Years Valid: 5)  
Corequisites: None  
MnTC Goals: None  

This is an introduction to computer-aided manufacturing using microcomputers and CAM software to create part geometry and conversion of geometry to tool paths for the CNC machines. Prerequisite: MACH1502.

B. COURSE EFFECTIVE DATES: 01/06/2004 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Explain the use of CAM in machining.  
2. Demonstrate effective drawing skills using CAM software.  
3. Demonstrate the proper selection of tool paths using CAM software.  
4. Learn effective programming skills using CAM software.  
5. Learn how to import files from outside sources into CAM software.  
6. Describe different machine types and the posting process to those machines.  
7. Explain the importance of proper cutting tool selection when using CAM software.

D. LEARNING OUTCOMES (General)

1. The learner will demonstrate knowledge in creating CAM geometry.  
2. The learner will demonstrate knowledge in creating CAM tool paths.  
3. The learner will demonstrate knowledge in editing NC programs.

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

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted