

Minnesota State College Southeast

MACH 2640: CNC Precision Machining Capstone

A. COURSE DESCRIPTION

Credits: 5

Lecture Hours/Week: 1

Lab Hours/Week: 8

OJT Hours/Week: *.*

Prerequisites: None

Corequisites: None

MnTC Goals: None

In this course, students will be required to design and manufacture a machining project. Students will write a Capstone Summary Report that includes design prints, process, set-up, and CNC programming details supported by digital pictures. (Prerequisites: MACH1601, MACH1605, MACH1610, MACH1615, MACH1625, MACH1630, MACH1641, MACH1650, MACH1661, MACH2633, MACH2635, and MACH2660 or equivalent) (5 Credits: 1 lecture/4 lab)

B. COURSE EFFECTIVE DATES: 01/27/2016 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Drafting and Design theory applied to project details
2. Process development for manufacturing
3. 2-D & 3-D model design
4. Application of CAD/CAM
5. Communications and presentation skills
6. Practice 5-S program principles

D. LEARNING OUTCOMES (General)

1. Practice Southeast Technical College shop safety rules
2. Wear proper attire for safety
3. Design and manufacture a machining project
4. Use the lab time to support the capstone course project
5. Write a capstone summary report that includes design prints, set-up, and CNC programming details supported by digital pictures
6. Practice 5-S procedures to clean work area and maintain machine lubrication
7. Complete all assignments

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

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted