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