

MFG 113 - MACHINING I

Course Description

The student will be introduced to measurement and the safe use of layout and bench tools, drill press operations, and basic lathe facing and turning operations. Basic vertical milling operations will also be included. Group 2 course. Students will greatly benefit from having competency up to MTH 111.

Credit Hours

3

Contact Hours

5

Lecture Hours

1

Lab Hours

4

Recommended Prerequisites or Skills Competencies

Print reading, precision measurement, basic machining knowledge and skills, competencies in Communications equal to ENG99 and math equal to MTH23. Students will greatly benefit from having competency up to MTH 111.

General Education Outcomes supported by this course

Critical Thinking - Direct

Course Learning Outcomes

Knowledge:

- Recognize the capabilities of various machine tools.
- Describe metal cutting theory and fluids.

Application:

- Demonstrate basic vertical mill, engine lathe, drill press, and band/cutoff saw operations to standards.

Integration:

- Perform various operations on conventional machines to meet specifications on a given print.
- Self-assess the conformance of the project with the assigned specifications.

Human Dimension:

- Discuss the impact of current metal cutting theory and fluids on machining products and practice.

Caring - Civic Learning:

- Demonstrate safety and caring for themselves through proper use and applications of tools.

Learning How to Learn:

- Utilize machining skills in real-world applications.