MFG 114 - MACHINING II

Course Description

This course will introduce students to machining procedures beyond the basic operations. The student should have previously acquired basic machining knowledge and skills. Lathe procedures will include threading and cutting tapers. Milling operations will include the offset boring head, and broaching. Precision grinding of parallel and angular surfaces using gauge blocks and a sine bar will be introduced. Students will study the process and perform hands on operations. Group 2 course.

Credit Hours

3

Contact Hours

5

Lecture Hours

1

Lab Hours

4

Required Prerequisites

MFG 113 or MNG 260

Recommended Prerequisites or Skills Competencies

Print reading, precision measurement, basic machining knowledge and skills, competencies in Communications equal to ENG 99/108 and Math equal to MTH 100. Students will greatly benefit from having competency up to MTH 111

Course Learning Outcomes

Knowledge:

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

Application:

- Demonstrate advanced machining procedures 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 and those around them through proper use and applications of tools.

Learning How to Learn:

- Utilize machining skills in real-world applications.