



MTT 1125

Division: Career and Technical Education

Department: Industrial Technology

Course: MTT 1125

Title: Machine Tool Shop I

Catalog Description:

This is a lab course for first semester students. It teaches the manufacture of metal parts using machine tool operations and covers hands-on operations of the engine lathe, drill press, pedestal grinder, and vertical milling machine. Students practice all common operations done on a metal cutting lathe and are introduced to basic introduction of the vertical milling machine. The course includes demonstrations, practical applications, and labs. Those that complete the course should have entry skills for the machine tool industry.

General Education Requirements: N/A

Semesters Offered: TBA

Credit/Time Requirement: Credit: 5; Lecture: 0; Lab: 15

Clock/Hour Requirements: 225

Offered for Non-Credit: Yes

Prerequisites: N/A

Corequisites: MTT 1110

Justification:

This course teaches students in the fundamentals approved by our program advisory committee.

Student Learning Outcomes:

Upon successful completion of this course, students should be able to:

- set up and operate engine lathes, drilling machines, and vertical milling machines
- perform layout and measuring operations with layout and measuring tools
- understand safety rules, regulations, and procedures associated with machine tool technology.

Content:

Course objectives will be accomplished by providing students with learning experiences in the following subject areas:

- proper safety techniques

- grinding lathe tools
- bench and pedestal grinders
- lathe controls
- lathe operations
- measuring tool procedures
- milling machine controls
- milling machine operations
- hand tool and bench work.

General Education Outcomes:

Applied Education Outcomes:

1) Students will acquire entry-level skills specific to and appropriate for employment in their chosen field of study.

Students will learn the theory of Machining Fundamentals and will learn hands on in the lab with required projects to prepare them for entry level jobs on conventional machines.

3) Students will demonstrate safe practices and awareness of potential hazards in their field of expertise.

Students will participate in a weekly safety meeting where they will take their turn as safety chair. Students will demonstrate safety in the lab of those comparable to industry standards.

Key Performance Indicators:

Student Learning Outcomes will be assessed by two or more of the following Key Performance Indicators:

- safety practices while working in the shop
- written tests
- quizzes
- assignments
- competency in subsequent courses and on projects.

Representative Text and/or Supplies:

Optimum Class Size: 10

Maximum Class Size: 20

Signatures:

I hereby submit this course syllabus:

Alan Hart, AAS, Instructor

I hereby find this course consistent with the goals and resources of the Industrial Technology Department:

Alan Hart, AAS, Instructor, Chair

I hereby find this course consistent with the goals and resources of the Career and Technical Education Division:

Michael P. Medley, MBA, Assistant Professor, Dean

I have discussed the need for library resources related to this class with the person submitting the syllabus:

Lynn Anderson, MLIS, Technical Services Librarian (Main Campus)

Michelle Olsen, MLS, Campus Librarian (Richfield Campus)