



MTT 1000

Division: Career and Technical Education

Department: Machine Tool Technology

Course: MTT 1000

Title: Survey of Machine Tool Technology

Catalog Description:

This is an introductory course for those interested in the world of manufacturing. It emphasizes the machine tool field and includes some hands-on activities with both metal cutting lathes and milling machines.

General Education Requirements: N/A

Semesters Offered: TBA

Credit/Time Requirement: Credit: 2; Lecture: 1; Lab: 3

Clock/Hour Requirements: 60

Offered for Non-Credit: No

Prerequisites: None

Corequisites: None

Justification:

This course provides instruction in the fundamentals approved by our program advisory committee and is comparable to UVSC MTT 1000.

Student Learning Outcomes:

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

- increase their awareness of careers in the world of manufacturing
- demonstrate safe shop practices while working with equipment
- demonstrate how to make accurate measurements with precision measuring instruments
- demonstrate and use proper lathe practices
- demonstrate and use proper mill practices.

Content:

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

- a job awareness search using different media sources
- proper safety techniques
 - personal safety
 - shop safety
 - equipment safety
- care and use of measuring equipment

- steel rule
- micrometers
- calipers
- gauges
- use and care of the engine lathe
- use and care of the ram and turret mill
- introduction to Computer Numerical Control (CNC).

General Education Outcomes:

- 4) Retrieve, evaluate, interpret, and deliver information through a variety of traditional and electronic media. Students will research projects through the *Machinery Handbook*, Internet, and company-specific websites. Specifications on material structure, machineability, and other details for a given job will need to be identified, evaluated, and interpreted before being applied to production.

Key Performance Indicators:

In class:

- Students demonstrate safety practices while working in the shop.
- The student's knowledge and skills are tested by the ability to complete assignments with a 75% minimum accumulated score.
- Written tests and quizzes are given on major subject areas.

Following class:

- Upon completion of the course, competency will be demonstrated in subsequent courses and on projects.

Representative Text and/or Supplies:

- James Dunn, *Machine Shop I*, current edition, Department of Vocational and Technical Education Curriculum Instructional Center.

Optimum Class Size: 10

Maximum Class Size: 20

Signatures:

I hereby submit this course syllabus:

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I hereby find this course consistent with the goals and resources of the Machine Tool 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)