

Lassen Community College Course Outline

GS-110.02 Introduction to Machine Shop-Mill

3.0 Units

I. Catalog Description

An introductory course designed to teach the student basic machine shop tools, equipment and their usage. This course requires an additional fee of \$40 to cover the costs of course handouts, cutting tools, cutting oil, sandpaper, and steel, etc.

Diversity Statement

Our commitment to diversity requires that we strive to eliminate barriers to equity and that we act deliberately to create a safe and inclusive environment where individual and group differences are valued and leveraged for the growth and understanding as an educational community.

Additional Course Information

- Does Not Transfer to UC/CSU
- 34 Hours Lecture, 68 Outside of Class Hours, 51 Hours Lab, 153 Total Hours of Instruction
- Fall and Spring

II. Coding Information

Repeatability: Not Repeatable

Grading Option: Graded only

Credit Type: Not degree applicable

TOP Code: 095630

III. Course Objectives

A. Course Student Learning Outcomes

Upon completion of this course the student will be able to:

1. Safety, basic usage of common machine shop tools, equipment, milling machines

B. Course Objectives

Upon completion of this course the student will be able to:

1. Describe cutting tools and proper usage.
2. Demonstrate the proper sharpening of cutting tools.
3. Demonstrate setup on machines.
4. Identify measuring instruments and their usage.
5. Machine round and square project steel to proper dimensions using a milling machine.

IV. Course Content

A. Outline of Topics

1. Safety in the shop on major machinery and hand tools
 - a. Milling machines

- b. Grinders
- c. Drill press
- d. Metal cutting saws
- 2. Operation of machine shop tools
 - a. Milling machines
 - b. Grinders
 - c. Drill press
 - d. Metal cutting saws
- 3. Use of precision measuring tools
 - a. Calipers
 - b. Dial indicators
- 4. cutting tools
- 5. sharpening cutting tools
- 6. Reading machine tool prints

V. Assignments

- A. Appropriate Readings
 - 1. Instructor Handouts and Trade Journals
- B. Writing Assignments
 - 1. The student will be required to keep a journal of notes.
- C. Expected Outside Assignments
 - 1. Instructor Handouts and Trade Journals
 - 2. The student will be required to keep a journal of notes.
- D. Specific Assignments that Demonstrate Critical Thinking
 - 1. Students will demonstrate critical thinking by designing and altering tools to increase productivity.

VI. Methods of Evaluation

Traditional Evaluation

The student will be evaluated on class participation and completion of lab assignments.

Hybrid Evaluation

Quizzes and exams could be administered in person and/ or online. Students will be expected to complete online assignments and activities equivalent to in class assignments and activities for the online portion of the course. Electronic communication, both synchronous and asynchronous (chat/forum) will be evaluated for participation and to maintain effective communication between instructor and students.

VII. Methods of Delivery

- Traditional Classroom Delivery
- Correspondence Delivery
- Hybrid Delivery
- Online Delivery

Traditional Classroom Delivery

Lecture, discussion, audio/visual aids, demonstration, group exercises, guest speakers, lab, individualized programs and other as needed.

Hybrid Delivery for Courses with a Lab

Hybrid modality may involve face to face instruction mixed with online instruction. A minimum of 1/3 of instruction, including 100% labs, will be provided face to face. The remaining hours will be taught online through a technology platform as adopted by the district.

VIII. Representative Texts and Supplies

- A. Instructor Handouts and Trade Journals
- B. Walker, John R. and Dixon, Bob, Machining Fundamentals, 11th Edition, ©2023, Goodheart-Willcox, ISBN: 978-1619602090

IX. Course Status

- 1. Current Status: Pending
- 2. Original Approval Date:
- 3. Course Originator: Bauer Buck
- 4. Board Approval Date:
- 5. Chancellor's Office Approval Date:
- 6. Revised By: Bauer Buck
- 7. Curriculum/Academic Standards Committee Revision Date: