

Linn-Benton Community College, Machine Tool Technology Department
Course Syllabus

Course name: Manufacturing Processes 2

Course number: MA3.397B 02

Credits: 2

Prerequisite: Manufacturing Processes 1

Days, Hours: Friday, 9:00 to 11:50 AM

Location: IB 102

Instructor: Ryan Powell

Office hours/student meetings: By appointment, via ZOOM

Office: IB 111A

Phone number: 541-917-4599

Email address: powellr@linnbenton.edu

Catalog description: This course provides training and learning experiences in machining operations at an intermediate level. Students will be using the lathe and the milling machine to complete projects. Skills for successful employment are emphasized.

Course learning outcomes: Students successfully completing this course will be able to:

- Set-up and operate the vertical milling machine and the engine lathe at an intermediate level.
- Apply safe shop practices.
- Cut threads on the lathe
- Understand the relationship between cutting speed, feed rate and depth of cut.
- Understand tool geometry and use a bench grinder to sharpen a tool bit for threading.
- Make accurate measurements with a micrometer, caliper and thread gages.
- Demonstrate precision lay-out skills.

Learning activities: This course will include lectures, homework, quizzes, demonstrations and hands on machine shop projects.

Lectures to be delivered via ZOOM

Homework and quizzes delivered via MOODLE

Demonstrations and shop projects will be in person, conditions permitting

Assessment tasks: A student's progress will be evaluated as follows:

- Class attendance and participation and quizzes 50% (Includes in-person, Moodle, and ZOOM activities)
- Project completion 30%
- Homework, quizzes, mid-term, final 20%

Course content

The following topics will be covered in this course:

- Safety in the machine shop
- Basic blueprint interpretation as it relates to threads
- ANSI thread specifications
- Basic thread calculations
- Single point threading on a lathe
- How to sharpen a lathe tool for threading
- Using thread gages
- The three wire method for measuring thread pitch diameter

Request for Special Needs or Accommodations

Direct questions about or requests for special needs or accommodations to the LBCC Disability Coordinator, RCH-105, 6500 Pacific Blvd. SW, Albany, Oregon 97321, Phone 541-917-4789 or via Oregon Telecommunications Relay TTD at 1-800-735-2900 or 1-800-735-1232. Make sign language interpreting or real-time transcribing requests 2-4 weeks in advance. Make all other requests at least 72 hours prior to the event. LBCC will make every effort to honor requests. LBCC is an equal opportunity educator and employer.

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Rolen, CC-108, 541-917-4425; Lynne Cox, T-107B, 541-917-4806, LBCC, Albany, Oregon. To report: linnbenton-advocate.symplicity.com/public_report

Students who may need accommodations due to documented disabilities, who have medical information which the instructor should know, or who need special arrangements in an emergency should speak with their instructor during the first week of class. If you believe you may need accommodations but are not yet registered with the Center for Accessibility Resources (CFAR), please visit the CFAR Website for steps on how to apply for services or call 541-917-4789.