Linn-Benton Community College, Machine Tool Technology Department

Course Syllabus

Course name: Advanced CNC Technology III

Course number: MA3.453

Credits: 3

Days, Hours: ZOOM Meeting Mondays @ 3:00 PM, Demos TBA

Location: Online Via ZOOM meeting and Moodle

Perquisite: Completion of Advanced CNC Technology II (MA3.452) with a "B" or better

Required text: None

Required tools: None

Instructor: Ryan Powell

Phone number: 541-917-4599

Email address: powellr@linnbenton.edu

Office: ZOOM meetings only, LBCC campus currently closed to visitors

Office hours/student meetings: By appointment, see instructor website

Catalog description: This course provides training and learning experiences in Computer Numeric Control (CNC) technology. Students will receive training on safe CNC operation skills on a number different of CNC machines and controls.

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

- Understand good CNC operator skills on the DOOSAN PUMA CNC Lathe.
- Know the steps to call up an existing program, check offsets and perform a dry run.
- Know the steps to make program and tool adjustment as required by machining considerations.
- Be able to follow set up sheet and blueprint instructions.
- Read, write and edit basic G&M machine code.
- Understand basic fixturing and programming concepts as they relate to the CNC Lathe.

Learning activities: This course will include a combination of lectures, demonstrations, and completion of online educational materials.

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

- Notebook 25%
- Class participation and completion of assignments 50%
- Completion of Online "certification" Exam 25%

Course Content (may vary based on learning environment)
The following topics will be covered in this course:

- Set up the DOOSAN Lathe for program execution
- Safe operation of the DOOSAN Lathe
- Set up of Lathe tooling for main and sub spindle
- Tool and work offsets for main and sub spindle
- Tooling and tool holders for the Lathe
- Insert identification
- G and M code reading and understanding
- Tool setter usage
- Mastercam programming considerations for Lathe with live tooling

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.

LBCC Comprehensive Statement of Nondiscrimination

LBCC prohibits unlawful discrimination based on race, color, religion, ethnicity, use of native language, national origin, sex, sexual orientation, gender, gender identity, marital status, disability, veteran status, age, or any other status protected under applicable federal, state, or local laws. For further information see Board Policy BP-1015. Title II, IX, & Section 504: Scott 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.