Course Name: CNC Special Projects

Course Number: MA3.416 01/02

Hours, Days: 1:00-3:50 PM (02) or 6:00-8:50 PM (01) Wednesday and Thursday

Credits: 4

Prerequisites: CNC Mill (MA3.420) and CNC Lathe (MA3.421)

Calculator Required: Yes. (Sharp EL506X recommended)

Location: Remote/Distance Learning.

Instructor: Chris Berry

Office hours: via Zoom by appointment

Phone number: Office 541-917-4509 / Cell 503-931-7728

Email address: berryc@linnbenton.edu

Course Description: This is the third in the series of CNC courses in the Machine Tool Technology One-Year Certificate at Linn-Benton Community College. Students will receive training on safe and effective CNC operation skills. The CNC machines will include Vertical Machining Centers and Turning Centers. A series of lectures, laboratory assignments, programming exercises and skills tests will guide students through a series of competencies. The primary focus of this course is skills for successful employment.

Course Objectives: Students successfully completing this course will be able to:

* Demonstrate good CNC machine operator skills on several different machine controls.
* Call up an existing part program, check offsets and perform a dry run.
* Adjust part programs as required by machining considerations.
* Follow set up sheet instructions.
* Read, write and edit basic G&M machine code.
* Understand and follow safety procedures for CNC machine tools.
* Plan a logical order of operations and tool changes.

Methods of Instruction: A combination of lectures, demonstrations and laboratory assignments will be utilized.

Methods of Evaluation: Student’s progress will be assessed with a series of skills tests and laboratory assignments. Midterm and Final examinations will be given. Students are required to keep an organized notebook and demonstrate employable “soft skills” such as attendance, timeliness, participation, and cooperation.

* Soft Skills = 15%
* Notebook = 10%
* Skills tests = 20%
* Lab assignments =20%
* Midterm exam = 15%
* Final exam = 20%

Course Content: The following topics will be covered in this course.

• Start up and initialization procedures

• Manual operation

• Manual Data Input

• Setting work coordinates

• Setting tool length offsets and tool radius offsets

• Reading, writing and editing G&M machine code

• Safety in regard to proving part programs

• Cutter compensation

• Inspection of machined parts

• Machine operator skills

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](http://www.linnbenton.edu/faculty-and-staff/administrative-information/policies/board-policies-and-administrative-rules/1000-series-the-college/board-policy-series-number-1050-equal-opportunity-statement.php). 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](http://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](https://linnbenton.edu/cfar) for steps on how to apply for services or call 541-917-4789.