Clackamas Community College

Online Course/Outline Submission System

☐ Show changes since last approval in red   [Print] [Edit] [Delete] [Back]

[Reject] [Publish]

Section #1 General Course Information

Department: Manufacturing

Submitter

First Name: Mike
Last Name: Mattson
Phone: 3322
Email: mattsonm

Course Prefix and Number:MFG - 201

 # Credits:4

Contact hours

Lecture (# of hours):
Lec/lab (# of hours): 88
Lab (# of hours):
Total course hours: 88

For each credit, the student will be expected to spend, on average, 3 hours per week in combination of in-class and out-of-class activity.

Course Title:CNC I: Set-up and Operation

Course Description:

A hands-on class will teach students how to set-up and operate CNC milling centers. Include an introduction to G&M -code programming. Designed for persons with little or no previous experience.

Type of Course: Career Technical Preparatory

Is this class challengeable?

Yes

Can this course be repeated for credit in a degree?

No

Is general education certification being sought at this time?

No

Does this course map to any general education outcome(s)?

No

Is this course part of an AAS or related certificate of completion?

Yes

Name of degree(s) and/or certificate(s): Manufacturing Programs

Are there prerequisites to this course?

No

Are there corequisites to this course?

No

Are there any requirements or recommendations for students taken this course?

Yes

Recommendations:MFG-109, MFG-112, & MTH-050

Requirements: None

Are there similar courses existing in other programs or disciplines at CCC?

No

Will this class use library resources?

No

Is there any other potential impact on another department?

No

Does this course belong on the Related Instruction list?

No

GRADING METHOD:

A-F or Pass/No Pass

Audit:Yes

When do you plan to offer this course?

✓ **Fall**

Is this course equivalent to another?

If yes, they must have the same description and outcomes.

No

Will this course appear in the college catalog?

Yes

Will this course appear in the schedule?

Yes

Student Learning Outcomes:

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

1. appreciate how CNC machine tools have benefited industry by increasing productivity and reducing product cost,
2. understand the control system of a CNC machine,
3. use trigonometry to solve programming problems,
4. identify and use standardized G and M control codes specific to FANUC control systems,
5. transfer programs to and from a CNC machine tool using communication software,
6. install work-holding hardware and set-up machine work-zeros,
7. install tooling into a CNC machine,
8. touch off tools and set-up tool height offsets,
9. perform 1st runs on the CNC programs for the purpose of proving them out
10. work safely around automated manufacturing equipment.

This course does not include assessable General Education outcomes.

Major Topic Outline:

1. History, wages and controls.
2. Cartesian coordinate system.
3. Parameters, reference & home.
4. Machine & workpiece coordinates.
5. Tool length & radius compensation.
6. CNC tooling basics.
7. Machine set-up and operation.
8. G & M-codes.
9. Canned cycles.
10. Projects.

Does the content of this class relate to job skills in any of the following areas:

1. Increased energy efficiency	**No**
2. Produce renewable energy	**No**
3. Prevent environmental degradation	**No**
4. Clean up natural environment	**No**
5. Supports green services	**No**

Percent of course:0%

First term to be offered:

Next available term after approval

:   2/11/2014