

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: **Chris**

Last Name: **Rizzo**

Phone: **3327**

Email: **Chrisr**

Course Prefix and Number: MFG - 206

Credits: 3

Contact hours

Lecture (# of hours):

Lec/lab (# of hours): 66

Lab (# of hours):

Total course hours: 66

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: Computer-Aided Manufacturing III

Course Description:

This is the final class in a series of three CAD/CAM courses: 204 and 205. Students are exposed to advanced cad/cam processes, including mill/turn, four and five axis machining, tombstone and work holding concepts.

Type of Course: Career Technical Preparatory

Is this class challengeable?

No

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?

Yes

Pre-reqs: MFG-201, MFG-202, MFG-204 and MFG-205

Have you consulted with the appropriate chair if the pre-req is in another program?

No

Are there corequisites to this course?

No

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

No

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

No

Will this class use library resources?

Yes

Have you talked with a librarian regarding that impact?

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?

✓ **Spring**

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. set-up and operate multi-axis milling process,
2. set-up and operate a lathe with live tooling,
3. demonstrate the capabilities and limitations of multi-axis machining,
4. demonstrate varied work holding and tooling systems used in industry.

This course does not include assessable General Education outcomes.

Major Topic Outline:

1. Introduction to multi-axis.
2. Types of multi-axis machines.
3. Work zeros, offsets, and axis combinations.
4. Programming techniques and processes.
5. Introduction to mill/turn.
6. Types of mill/turning machines.
7. Programming techniques and processes.

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:

Specify term: Spring 2015
