

Clackamas Community College

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Section #1 General Course Information**Department:**Manufacturing**Submitter**

First Name: Mike

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Course Prefix and Number:MFG - 271

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:Mastercam Mill 1**Course Description:**

Covers the creation and manipulation of two and three dimensional wire frame models as well as the creating, editing, and verification of 2-1/2 axis toolpaths. A fundamental understanding of the CAD/CAM process will be gained.

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?

No

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?

Not every term

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. construct 2D and 3D wire frame models and simple solid models,
2. create, edit and verify tool paths for contour, pocket, and drill operations;
3. use WCS to assign a tool plane,
4. save common operations and apply to part families,
5. create custom tool definitions and material files,
6. explain the functions of the job set-up and back plot features.

This course does not include assessable General Education outcomes.

Major Topic Outline:

1. Mastercam Menus.
2. Configuration.
3. C-hooks.
4. 2D Part Construction.
5. 3D Part Construction.
6. Saving and backing up data.
7. Job set-up.
 - a. WCS (work coordinate system).
 - b. Stock definition and material selection.
8. Operations manager.
 - a. Editing and modifying within the manager.
9. Toolpaths –
 - a. Contour, circmill, helical thread, Helical Bore.
 - b. Drill & Auto drill.
 - c. Pocketing.
 - d. Facing.
10. CAD/CAM 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

:
