Clackamas Community College

Online Course/Outline Submission System

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Section #1 General Course Information

Department: Manufacturing

Submitter

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

Course Prefix and Number: CDT - 108A

 # 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: Introduction to SolidWorks

Course Description:

This course is an introduction to the SolidWorks parametric mechanical software. Students will design 3D solid parts, sheet metal parts and assemblies, and develop 2D documentation from them.

Type of Course: Career Technical Preparatory

Reason for the new course:

Course coming forward for outline review.

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?

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:No

When do you plan to offer this course?

✓ Fall

✓ **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:

First Credit:
1. open a sketch on existing plane and create 2D geometry,
2. apply geometric relationships between sketch elements,
3. extrude, cut and sweep 2D geometry to create 3D solid models;
Second Credit:
4. loft and revolve 2D geometry to create 3D solids models,
5. add applied features to the 3D solid model,
6. apply mating relationships to 3D elements in an assembly,
Third Credit:
7. create 2D documentation of 3D solid models,
8. apply dimensions and annotation to the drawings,
9. document and manage 3D assemblies,
10. create sheet metal layouts.

This course does not include assessable General Education outcomes.

Major Topic Outline:

1. Introduction to the SolidWorks desktop. Opening sketches on existing planes and orientating the screen to that plane. Sketching lines and tangent arcs, defining their length and relationship to other sketch entities.
2. Creating fillets and chamfers on parts. Creating revolved solids.
3. Creating hole features, patterns of holes and mirroring features.
4. Creating a part using revolve, loft, extrude and fillet/chamfer.
5. Using the sweep tool, creating helices, and using Shell to create hollow parts.
6. Creating 2D documentation from the 3D parts.
7. Assemblies from existing parts. Creating a part in the context of an assembly.
8. Sheet metal parts that unfold to make the flat pattern.

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: 2/11/2014

Next available term after approval
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