Sinclair Community College
444 E. Third St.
Dayton, OH 45402

Master Syllabus

MET 1301 - SolidWorks Basics

Division: Science, Mathematics and Engineering

Department: Mechanical Engineering Tech

Credit Hour Total: 3.0 **Lecture Hrs:** 1.0 **Lab Hrs:** 6.0

Prerequisite(s): MET 1101

Date Revised: February 2014

Course Description:

Utilize SolidWorks mechanical design automation software to build parametric models of parts and assemblies and learn how to make drawings of those parts and assemblies. One classroom, six lab hours per week.

General Education Outcomes:

- Oral Communication
- Critical Thinking/Problem Solving
- Computer Literacy
- Information Literacy

Course Outcomes:

Modify
Demonstrate the ability to modify parts using SolidWorks techniques.

Assessment Method: Portfolios
Performance Criteria: 70% of required work 100% correct

Menus
Develop the effective use of the menus in SolidWorks.

Assessment Method: Portfolios
Performance Criteria: 70% of required work 100% correct

Sketch planes
Develop an understanding of sketch planes and how to use the technique for profile modeling.

Assessment Method: Portfolios
Performance Criteria: 70% of required work 100% correct

Constraints
Apply geometric constraints and dimensions for profile modeling.

Assessment Method: Portfolios
Performance Criteria: 70% of required work 100% correct

Assembly
Develop an understanding of assembly modeling and the ability for creation of assembly layout sketches, placing parts into assemblies, and moving parts.

Assessment Method: Portfolios
Performance Criteria: 70% of required work 100% correct

Outline:

Work with datum plane concept in SolidWorks
Create a number of 3D models and drawings in 3D workspace
Create part models and sub-assemblies
Edit and modify the 3D models and drawings
Design and assemble the drawing into a working assembly