

## Master Syllabus

### MET 1301 - SolidWorks Basics

**Division:** Science, Mathematics and Engineering

**Department:** Mechanical Engineering Technology

**Credit Hour Total:** 3.0

**Lecture Hrs:** 1.0 **Lab Hrs:** 6.0

**Date Revised:** February 2016

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### 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 Competency
- ▣ Critical Thinking/Problem Solving Competency
- ▣ Computer Literacy Competency
- ▣ Information Literacy Competency

### 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

Use assembly modeling and create 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