
MIDDLESEX COUNTY COLLEGE

COURSE SYLLABUS

Department:	Engineering Technologies
Program:	Mechanical Engineering Technology
Course Number:	MEC 250
Title of Course:	Solid Modeling
Curriculum Coordinator:	Rick Schieni
Designation:	Required Course

Course Description:

An introductory course to familiarize students with feature-based parametric parts modeling. Students will be involved with sketching, constraining, dimensioning, and viewing different viewports. Techniques such as profile extrusion, revolving, and sweeping, feature editing, creating work axis, making active sketch planes, and creating work planes and points. Students will also master controlling object visibility; cutting, joining, and intersecting operations; holes and arrays, dimension display and equations; and assigning design variables.

Prerequisite:

MEC 125 Advanced Mechanical Drawing CAD II

Co-requisite:

None

Textbooks and /or other required material:

Mastering SolidWorks by Tran, Pearson, 16th Ed and Beginners GDE 2017 by Reyes, SDC, 17th Ed

Course Learning Outcomes and their relationship to Student Outcomes:

1. Create fully defined sketches that can be used to generate part features.
2. Create parts by extruding, revolving, cutting, and lofting sketches drawn on appropriate planes. **(SO a)**
3. Create part drawings (including orthographic, section and auxiliary views as needed), including appropriate dimensions. (Conventional and GDT) **(SO f)**
4. Create assemblies of parts. **(SO a)**
5. Produce assembly drawings. **(SO f)**
6. Create exploded assembly drawings.
7. Animate assemblies (motion) and generate video files.
8. Create sheet metal drawings.
9. Use parts from libraries in assemblies.
10. Use additional SW features: Mirroring, patterning, sweeps, shells, reference planes.

Topics Covered:

- Sketching, part creation and detail drawings
- Assemblies
- Exploding and animating assemblies
- Assembly drawings
- Sheet metal drawings
- Part Libraries
- Additional SW drawing features

Class/Laboratory schedule. Number of sessions each week and duration of each session:
6 laboratory hours per week for 14 weeks

Criterion 5 Contribution:

Technical Content

Prepared By:	Joseph Misuraca	Date:	9/10/2008
Updated By:	Thomas Sabol	Date:	1/20/2014 Rev 1
Updated By:	Craig Stickler: Updated texts used, made changes to reflect that MEC125 is now a prerequisite for this course, updated links to "student outcomes."	Date:	4/20/14 Rev 2
Updated By:	Craig Stickler: Changed learning outcome to reflect that some of the R2 outcomes are now outcomes for MEC125 and added new outcomes.	Date:	9/22/2014 Rev 3
Rev 4:	General Update	Date:	3/15/21