

Course Outline

PREREQUISITES:

Mechanical design experience and experience with the Windows operating system. This course is intended for users who are new to 3D design.

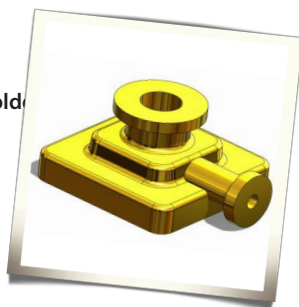
DESCRIPTION:

The goal of this course is to teach you how to build multibody and complex shape models using SolidWorks. Most of the case studies and exercises in this course are taken from industrial-type applications and lessons primarily centre around working with solids. The focus is on the fundamental skills, tools and concepts central to successfully building complex and multibody solids.

Upon completion of this training course, you will be able to confidently create complex SolidWorks parts.

Lesson 1: Multibody Solids

- Multibody solids
- Bridging
- Introducing: solid bodies fold
- Extrude from
- Local operations
- Combined bodies
- Add, subtract and common
- Tool body
- Insert part
- Move / copy bodies
- Introducing mate reference
- Patterning

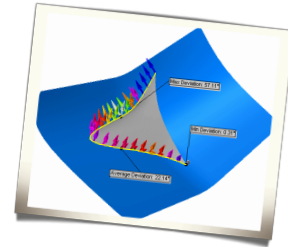


- Indent feature
- Using cut to create multibodies
- Saving solid bodies as parts and assemblies
- Insert into new part
- Feature scope
- Save bodies
- Splitting a part into multibodies
- Creating an assembly
- Create assembly
- Using split part with legacy data

Lesson 2: Sweeps

- Sweeping
- Case study: modeling a spring

- Sweeping along a 3D path
- 3D sketching
- Helix and spiral
- Projected curves
- Composite curves
- Sweeping
- Fit spline
- Case study: bottle
- Sweeping and lofting: what's the difference?
- Creating a curve through a set of points
- Sweep options
- Working with a non-planar path
- Variable radius filleting
- Split lines
- Analysing geometry
- Display curvature
- Show curvature combs
- Intersection curve
- Zebra stripes
- Selecting edges
- Performance considerations
- Modelling threads
- Orientation and twist control
- Align with end faces
- Sweeping along model edges
- SelectionManager
- Sweeping a tool body



Lesson 3: Lofts and Splines

- Basic lofting
- Using derived and copied sketches
- Centreline lofting
- Split entities
- Cleaning up a model
- Delete face
- Deviation analysis
- Spline sketching
- Advanced lofting
- Sketch picture
- Layout sketches
- Boundary feature

Lesson 4: Other Advanced Tools

- Advanced fillets
- Wrap feature
- Equation driven curves
- Deform feature
- Move face and delete face
- Using 3D sketch with the hole wizard