

SOLIDWORKS Assembly Modelling



Overview:

This course teaches you how to maximise your use of the assembly modelling capabilities of the SOLIDWORKS mechanical design automation software. Topics will cover different assembly methods, assembly performance ect.



Duration:

InClass: 3 Days (Full Time) 8:30am- 4:30pm

Distance Learning: 7 Days (Part Time)



Pre-requisites:

- Complete / attend Introduction to Technical Drawing course or similar experience
- Complete the SOLIDWORKS Essentials
- Computer literacy skills
- Understanding & reading technical drawings

Advanced Mate Techniques

- SOLIDWORKS assemblies
- Assembly file structure
- File references
- Solving mates
- Advanced mate techniques
- Mate references
- Design library parts
- Multiple selection mate references
- Multiple mate mode
- Driven mates
- Using misaligned mates
- Copying multiple components
- Summary: inserting and mating components
- Fixed components
- Advanced mate features
- Profile centre mate
- Rack and Pinion mate

Top-Down Assembly Modelling

- Top-Down assembly modelling
- Stages in the process
- Making changes to dimensions



- Adding features in-context
- Inserting a new part into an assembly
- Building in-context features
- Propagating changes
- Saving virtual parts as external
- External references
- Breaking and locking external references
- Assembly design intent
- SOLIDWORKS file utilities
- Removing external references

Assembly Features and Smart Components

- Assembly features and smart fasteners
- Assembly features
- Hole series
- Smart fasteners
- Smart components
- Flexible components

Assembly Editing

- Assembly editing
- Key topics
- Mate errors
- Replacing and modifying components
- Converting part and assemblies
- Replacing components using Save As
- Reloading components
- Component patterns

Configurations with Assemblies

- Using configurations with assemblies
- Creating configurations manually
- Configuration properties
- Using the modify configuration dialog
- Changing configurations using the Context toolbar
- Managing the tree display
- Assembly evaluation tools
- Controlling dimensions in an assembly
- Creating equality dimensions
- Equations with functions
- Comments
- Sensors
- Using the mate controller

Display States and Appearances

- Display states



- Bulk selection tools
- Advanced select
- Envelopes
- Appearances, materials, and scenes

Large Assemblies

- Large assemblies
- Key topics
- Assembly modes
- Assembly visualisation
- Lightweight components
- Large assembly mode
- Using SpeedPak
- Using simplified configurations
- Defeature
- Modifying the structure of an assembly
- Envelope publisher
- Large design review
- Comparison of modes and methods
- Tips for faster assemblies
- Drawing considerations

Facility Layout

- Facility layout
- Publishing an asset
- Using magnetic mates
- Modelling connection point geometry

Using SOLIDWORKS Treehouse

- SOLIDWORKS Treehouse
- Setting Treehouse instances

