

Training: SOLIDWORKS Refresher (4 days)

Prerequisites: Mechanical design experience, experience in the Windows® operating system, some experience with SOLIDWORKS or other CAD software.

Description: SOLIDWORKS Refresher is intended to review functions of the SOLIDWORKS software, for users who may have been removed from regular use for an extended period of time. It includes selected lessons and exercises from: SOLIDWORKS Essentials, Advanced Part Modeling and Assembly Modeling.

Introduction

- About This Course

Lesson 1: SOLIDWORKS Basics and the User Interface

- What is the SOLIDWORKS Software?
- Design Intent
- File References
- Opening Files
- The SOLIDWORKS User Interface
- Using the Command Manager

Lesson 2: Patterning

- Why Use Patterns?
- Linear Pattern
- Circular Patterns
- Reference Geometry
- Planes
- Mirror Patterns
- Using Pattern Seed Only
- Up To Reference
- Sketch Driven Patterns

Lesson 3: Editing, Repairs

- Part Editing
- Editing Topics
- Sketch Issues

Lesson 4: Editing: Design Changes

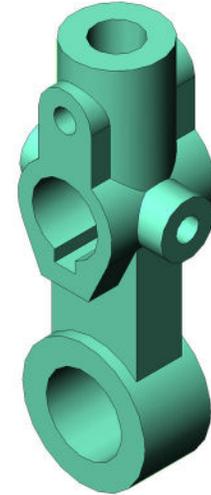
- Part Editing
- Design Changes
- Information From a Model
- Rebuilding Tools
- Sketch Contours
- Replace Sketch Entity

Lesson 5: Configurations

- Configurations
- Using Configurations
- Other Methods to Create Configurations
- Modeling Strategies for Configurations
- Editing Parts that Have Configurations
- Design Library
- In the Advanced Course

Lesson 6: Bottom-Up Assembly Modeling

- Case Study: Universal Joint
- Bottom-Up Assembly
- Creating a New Assembly
- Position of the First Component
- Feature Manager Design Tree and Symbols
- Adding Components
- Mating Components
- Using Part Configurations in Assemblies
- Subassemblies
- Smart Mates
- Inserting Subassemblies
- Pack and Go



Lesson 7: Using Assemblies

- Analyzing the Assembly
- Checking for Clearances
- Changing the Values of Dimensions
- Exploded Assemblies
- Rollback and Reorder Explode Steps
- Explode Line Sketch
- Bill of Materials
- Assembly Drawings



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Lesson 8: Multibody Design Techniques

- Multibody Parts
- Hide/Show Tree Items
- Multibody Design Techniques
- Solid Bodies Folder
- Local Operations
- Feature Scope
- Patterning Bodies
- Tool Body Technique
- Combining Bodies
- Intersect with Solid Bodies
- Indent Feature
- Case Study: Indent
- Deleting Solid Bodies

Lesson 9: Advanced Mate Techniques

- SOLIDWORKS Assemblies
- Assembly File Structure
- File References
- File Reference Example
- Solving Mates
- Advanced Mate Techniques
- Mate References
- Design Library Parts
- Capture Mate References
- Multiple Selection Mate References
- Multiple Mate Mode
- Driven Mates
- Using Misaligned Mates
- Copying Multiple Components
- Fixed Components
- Summary: Inserting and Mating Components
- Advanced Mate Features
- Profile Center Mate

Lesson 10: Assembly Editing

- Assembly Editing
- Case Study: Assembly Editing
- Mate Errors
- Replacing and Modifying Components
- Converting Parts and Assemblies
- Replacing Components Using Save As
- Reloading Components
- Component Patterns

Lesson 11: Using Configurations with Assemblies

- Using Configurations with Assemblies
- Creating Configurations Manually
- Configuration Properties
- Using the Modify Configurations Dialog
- Changing Configurations using the Context Toolbar
- Managing the Tree Display
- Assembly Evaluation Tools
- Controlling Dimensions in an Assembly
- Creating an Equality
- Equations With Functions
- Comments
- Sensors
- Using the Mate Controller

Lesson 12: Display States and Appearances

- Display States
- Bulk Selection Tools
- Advanced Select
- Envelopes
- Appearances, Materials and Scenes

Lesson 13: Large Assemblies

- Large Assemblies
- Key Topics
- Assembly Modes
- Assembly Visualization
- Lightweight Components
- Large Assembly Settings
- 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

