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Your Complete Engineering Resource Center

## **SolidWorks Assembly Modeling**

The goal of this course is to teach you how to utilize the assembly modeling capabilities of SolidWorks.

The topics covered in this course are:

### **Lesson 1: Top-Down Assembly Modeling**

- Top-Down Assembly Modeling
- Stages in the Process
- Building Virtual Parts
- Building Parts in an Assembly
- Assembly Features
- In-Context Features
- Propagating Changes
- Smart Fasteners
- Saving Internal Parts as External
- External References
- Breaking External References
- Removing External References

### **Lesson 2: Advanced Mate Techniques**

- Advanced Mates
- Adding Mate References
- Design Library Parts
- Capture Mate References
- Create Property Manager
- Smart Components
- Advanced and Mechanical Mate Types
- Summary: Inserting and Mating Components
- Multiple Mate Mode
- Using Copy with Mates
- Mate Options

### **Lesson 3: Using Configurations with Assemblies**

- Using Configurations with Assemblies
- Stages in the Process
- Component Patterns
- Using Configure Components
- Creating Configurations Manually
- Using Design Tables with Assemblies
- Understanding Design Tables
- Manipulating the Design Table

### **Lesson 4: Display States and Appearances**

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



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- Sensors

### **Lesson 5: Assembly Editing**

- Assembly Editing
- Key Topics
- Editing Activities
- Replacing and Modifying Components
- Troubleshooting an Assembly
- Replacing Components Using Save As
- Mirroring Components
- Hole Alignment
- Controlling Dimensions in an Assembly

### **Lesson 6: Layout-based Assembly Design**

- Layout-based Assembly Design
- Key Topics
- Blocks
- Inserting Blocks
- Testing with the MotionManager
- Creating a Part from a Block

### **Lesson 7: Large Assemblies**

- Large Assemblies
- Key Topics
- Lightweight Components
- Large Assembly Mode
- Selective Open with Hide
- Using Quick View/Selective Open
- Using SpeedPak
- Using Configurations with Large Assemblies
- Modifying the Structure of an Assembly
- Tips for Faster Assemblies
- Drawing Considerations
- SolidWorks Explorer
- Renaming Components

### **Large 8: The MotionManager**

- MotionManager
- Using the Animation Wizard
- Free Motion
- Drag Motion
- Motors and Motion
- Visual Properties
- Interpolation Modes
- View Orientation States
- Basic Motion
- Using Physical Dynamics

**Prerequisites:** SolidWorks Essentials

**Length:** 2 Days

**Cost:** \$695