

SolidWorks Essentials Course

Length: 3 Days

COURSE CONTENT

LESSON 1: INTRODUCTION

- About This Course
- What is the SolidWorks Software?
- Design Intent
- The SolidWorks User Interface

LESSON 2: INTRODUCTION TO SKETCHING

- Basic Sketching
- Sketch Entities
- Rules That Govern Sketches
- Design Intent
- Sketch Relations
- Dimensions
- Sketch Fillets
- Extrude

LESSON 3: BASIC PART MODELING

- Basic Modeling
- Terminology
- Choosing the Best Profile
- Choosing the Sketch Plane
- Sketching on a Planar Face
- Using the Hole Wizard
- Cut Feature
- View Options
- Filleting
- Detailing Basics
- Drawing Views
- Center Marks
- Model Dimensions
- Changing Parameters

LESSON 4: MODELING A CASTING OR FORGING

- Case Study: Ratchet
- Design Intent
- Boss Feature with Draft
- Symmetry in the Sketch
- Keyboard Shortcuts
- Using Model Edges in a Sketch
- Editing Features

LESSON 5: PATTERNING

- Why Use Patterns?
- Linear Pattern
- Circular Patterns
- Mirror Patterns
- Using Pattern Seed Only

LESSON 6: REVOLVED FEATURES

- Case Study: Hand wheel
- Design Intent
- Revolved Features
- Material and Mass Properties
- COSMOSXpress

LESSON 7: SHELLING AND RIBS

- Shelling and Ribs
- Analyzing and Adding Draft
- Other Options for Draft
- Full Round Fillets
- Thin Features

LESSON 8: EDITING: REPAIRS

- Part Editing
- Check Sketch for Feature
- Rebuilding Tools

LESSON 9: EDITING: DESIGN CHANGES

- Design Changes
- Sketch Contours

LESSON 10: CONFIGURATIONS OF PARTS

- Using Configurations
- Editing Parts that Have Configurations

LESSON 11: DESIGN TABLES AND EQUATIONS

- Modeling Strategies for Configurations
- Design Tables
- Equations
- Existing Design Tables

LESSON 12: BOTTOM-UP ASSEMBLY MODELING

- Case Study: Universal Joint
- Creating a New Assembly
- Adding Components
- Using Part Configurations in Assemblies
- Sub-assemblies
- Smart Mates

LESSON 13: USING ASSEMBLIES

- Using Assemblies
 - Analyzing the Assembly
 - Changing the Values of Dimensions
 - Using Physical Dynamics
 - Exploded Assemblies
 - Assembly Drawings
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