Course: SOLIDWORKS Advanced Part Modelling

Description
Learn how to create complex models. This online course teaches you how to create complex parts and use more advanced features including sweeps, lofts, boundaries and every type of fillet.

Training objectives
On completion of this course you will know how to create complex freeform parts associated with consumer product design. Create multibody parts and split them to create assemblies. Use advanced features to generate custom solid model part designs.

Prerequisites
Mechanical design experience. Experience with Windows Operating System.

Completed the SOLIDWORKS Essentials training course, or equivalent.

At least one month using SOLIDWORKS software.

Skills you will acquire

Who should attend
Users who need to create complex parts and want to learn how to use more advanced features; including sweeps, lofts, boundaries, and every type of fillet.

Course Outline

Introduction
- About This Course
- Hide/Show Tree Items

Lesson 1: Sketching with Splines
- Sketching Splines
- Introducing: Spline
- Introducing: Show Curvature Combs
- Sketch Picture
- Introducing: Sketch Picture Review

Lesson 2: Multibody Solids: How They Work
- Multibody Solids Multibody Techniques
- Introducing: Solid Bodies Folder
- Feature Scope Patterning Bodies Tool Body
- Introducing: Insert Part
- Introducing: Move/Copy Bodies
- Combining Bodies
- Introducing: Combine

Lesson 3: Uses of Multibody Solids
- Common Bodies
- Indent Feature
- Introducing: Delete Body
- Local Operations
- Modelling Negative Space Using Cut to Create Multibodies
- Saving Solid Bodies as Parts and Assemblies
- Introducing: Insert into New Part
- Introducing: Save Bodies
- Splitting a Part into Multibodies
- Introducing: Split Creating an Assembly
- Introducing: Create Assembly Using Split Part with Legacy Data

Lesson 4: Introduction to Sweeping
- Sweeping
- Case Study: Faux Raised Panel Door
- Sweep with Guide Curves
- Case Study: Bottle
- Sweep Options
- Sweep with Guide Curves
- Introducing: Dome
- Introducing: Selection Manager

Lesson 5: Working with Curves
- Case Study: Modelling a Spring Sweeping Along a 3D Path
- 3D Sketching
- Introducing: Helix and Spiral
- Introducing: Projected Curve
- Introducing: Composite Curve
- Introducing: Fit Spline
- Applying the Label to the Bottle
- Modelling Threads
- Case Study: Creating a Curve Through a Set of Points Sketch Blocks
- Introducing: Sketch Blocks
- Equation Driven Curves
- Introducing: Equation Driven Curve
- Introducing: Split Line

Lesson 6: Advanced Sweeping
- Orientation and Twist Control
- Align with End Faces
- Sweeping Along Model Edges
- Sweeping a Tool Body
Lesson 7: Lofts
- Lofting and Sweeping: What’s the Difference?
- How Lofting Works
- Basic Lofting
- Introducing: Loft
- Using Derived and Copied Sketches
- Copying a Sketch Derived Sketches
- Introducing: Insert Derived Sketch
- Centreline Lofting
- Introducing: Split Entities
- Cleaning Up a Model
- Introducing: Delete Face
- Introducing: Deviation Analysis
- Advanced Lofting
- Layout Sketches
- Boundary Feature

Lesson 8: Other Advanced Tools
- Advanced Fillets Analysing Geometry
- Introducing: Display Curvature
- Introducing: Intersection Curve
- Introducing: Zebra Stripes
- Introducing: Wrap Feature Deform Feature
- Introducing: Deform
- Introducing: Knit Surface Move Face and Delete Face
- Introducing: Move Face
- Performance Considerations