SOLIDWORKS ADVANCED PART MODELING

Length: 3 Days

Prerequisites: The SOLIDWORKS Essentials course completion and experience with the Windows™ operating system.

Description: The SOLIDWORKS Advanced Part Modeling course teaches how to use multibody solids, sweep features, lofting features, and the more advanced shaping capabilities of SOLIDWORKS.

Course Agenda:

Lesson 1: 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
- Deleting Solid Bodies
- Delete/Keep Body

Lesson 2: Saving Solid Bodies
- Multibody Part vs. Assembly
- Saving Bodies Functions
- Insert into New Part
- Save Bodies
- Modeling for Rapid Tooling
- Splitting a Part into Multiple Bodies
- Automating an Assembly
- Using Split Part with Legacy Data

Lesson 3: Sketching with Splines
- Curves in Sketches
- Using Sketch Pictures
- Splines
- Adding Spline Relations
- Changing Shape of Spline
- Fully Defining Splines
- Evaluating Splines
- Analyzing Solid Geometry
- Style Spline
- Fit Spline

Lesson 4: Introduction to Sweeping
- Sweeping
- Sweep with Guide Curves
- Pierce Relation
- Selection Manager
- Symmetrical Splines
- Circular Profile Sweep
- Dome Feature

Lesson 5: 3D Sketching and Curve Features
- Curve Features
- Sweeping Along a 3D Path
- 3D Sketching
- Helix Curves
- Creating a 3D View from Orthogonal Views
- Projected Curve Feature
- Combining Features
- Smoothing Transitions

Lesson 6: Threads and Library Feature Parts
- Bottle Features
- Modeling Threads
- Saving a Library Feature Part
- Performance Considerations
- Adding the Label Outline
- Creating the Sweep Path
- Sweeping Along Model Edges

Lesson 7: Advanced Sweeping
- Sweep Options
- Additional Sweep Settings
- Profile Orientation
- Intersection Curve Feature
- Visualizing Sweep Sections
- Face Curves
- Controlling Twist
- Solid Sweep
- Defining Twist
Course Agenda (Continued):

Equation Driven Curve

Lesson 8: Introduction to Loft and Boundary Features
- Comparing Complex Features
- How Loft and Boundary Features Work
- Loft Feature
- Boundary Feature
- Lofted Merge
- Reusing Sketches
- Copying Sketches
- Modify Sketches
- Derived Sketches
- Boundary Preview Options
- Sketch Block and Library Feature Profile

Lesson 9 Advanced Loft and Boundary Features
- Additional Curves in Loft and Boundary
- Centerline Lofting
- Loft Preview Options
- Adding Sketch Segments
- Split Entities
- Cleaning Up a Model
- Deleting Faces
- Evaluation Edges
- Face Fillets
- Curve Influence

Lesson 10: Advanced Filleting and Other Features
- Fillet Settings
- Fillet Parameters
- Constant Size Fillets
- Delete Face: Delete and Fill
- Partial Edge Parameters
- Fillet Options
- Variable Size Fillets
- Face Fillets
- FilletXpert
- Other Advanced Features
- Wrap Feature
- Deform Feature
- Direct Editing
- Move Face