Training: Mold Design Using SOLIDWORKS (2 days)

Prerequisites: Advanced Part Modeling

Description: Mold Design Using SOLIDWORKS teaches you several manual mold creation techniques and how to use the Mold Tools in SOLIDWORKS mechanical design automation software.

Introduction
- About This Course

Lesson 1 Surface Concepts and Imported Geometry
- Surfaces in Mold Design
- 3D Model Types
- Geometry vs Topology
- Behind the Scenes
- Creating Solids from Surfaces
- Decomposing a Solid into Surfaces
- Additional Surface Concepts
- Surfaces Concepts Takeaways
- Importing and Mold Design
- File Translation
- Why Do Imports Fail?
- SOLIDWORKS Import Options
- Comparing Geometry
- Addressing Translation Errors
- Repairing and Editing Imported Geometry
- Procedure for Rebuilding Fillets

Lesson 2: Core and Cavity
- Core and Cavity Mold Design
- SOLIDWORKS Mold Tools
- Mold Analysis Tools
- Analyzing Draft on a Model
- Using the DraftAnalysis Tool
- Draft Analysis Options
- Adding Draft
- Scaling the Model
- Establish the Parting Lines
- Shut-Off Surfaces
- Creating the Parting Surface
- Surface Bodies
- Creating the Mold Tooling
- Seeing Inside the Mold
- Interlocking the Mold Tooling
- Creating Part and Assembly Files

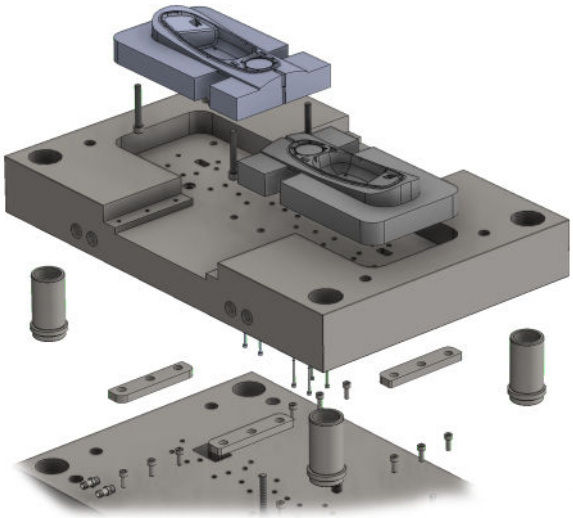
Lesson 3: Side Cores and Pins
- Additional Mold Tooling
- Trapped Molding Areas
- Side Cores
- Feature Freeze
- Lifters
- Core Pins
- Manual Selection Techniques
- Modifying Shut-Off Surfaces
- Completing the Tooling

Lesson 4: Advanced Parting Line Options
- Case Study: Manual Parting Line
- Case Study: Splitting a Part

Lesson 5: Creating Custom Surfaces for Mold Design
- Surface Modeling for Mold Design
- Case Study: Drill Bezel

Lesson 6: Advanced Surfacing for Mold Design
- Surface Modeling for Mold Design
- The Mixer
- Case Study: Mixer Rear Housing
- Case Study: Mixer Handle

Lesson 7: Alternative Methods for Mold Design
- Alternate Methods for Mold Design
- Using Combine and Split
- Creating a Cavity
- Techniques for Mold Tooling

Lesson 8: Reusable Data
- Reusing Data
- Task Pane
- SOLIDWORKS Resources
- Design Library
- File Explorer
- Library Features
- Configurations in Library Features
- Smart Components

Lesson 9: Completing the Mold Base
- Case Study: Mold Base
- Organizing the Assembly
- Modifying the Lifters
- Lifter Motion
- Ejector Pins
- Cooling the Mold
- Making the Drawing
- Making Changes
- Completing the Process