

SOLIDWORKS Mold Design

OVERVIEW

CLASSROOM LENGTH: 2 days / **INSTRUCTOR-LED ONLINE LENGTH:** 4 days

PREREQUISITES: We recommend completing the SOLIDWORKS Advanced Part Modeling course.

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.

LESSON 1:

SURFACE CONCEPTS AND IMPORTED GEOMETRY

- Course Overview
- Hide/Show Tree Items
- Accessing Commands
- Importing Data
- 3D Model Types
- Definitions
- Case Study: Solids vs. Surfaces
- Creating Solids From Surfaces
- Decomposing a Solid into Surfaces
- Additional Surface Concepts
- Importing Mold Design
- File Translation
- Why Do Imports Fail?
- SOLIDWORKS Import Options
- Case Study: Repairing and Editing Imported Geometry
- Procedures for Rebuilding Fillets

LESSON 2:

CORE AND CAVITY

- Core and Cavity Mold Design
- SOLIDWORKS Mold Tools
- Case Study: Camera Body
- Mold Analysis Tools
- Analyzing Draft on a Model
- Using the Draft Analysis 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
- Case Study: Power Saw Housing
- Trapped Molding Areas
- Side Cores
- Feature Freeze
- Lifters
- Core Pins
- Manual Selection Techniques
- Case Study: Mixer Base
- Modifying Shut-Off Surfaces
- Completing the Tooling

LESSON 4:

ADVANCED PARTING LINES

- Case Study: Manual Parting Line
- Case Study: Splitting a Part
- Exercise 9: Peeler

LESSON 5:

CREATING CUSTOM SURFACES FOR MOLD DESIGN

- Surfaces in Mold Making
- Case Study: Plastic Bezel of a Cordless Drill
- Creating New Drafted Faces
- Interlock Surfaces
- Case Study: Router Bottom

LESSON 6:

ADVANCED SURFACING FOR MOLD DESIGN

- Surface Modeling for Mold Design
- The Mixer
- Case Study: Mixer Rear Housing
- Case Study: Mixer Handle

 **SOLIDWORKS** Mold Design**LESSON 7:****ALTERNATE METHODS FOR MOLD DESIGN**

- Alternate Methods for Mold Design
- Case Study: Using Combine and Split
- Creating a Cavity
- Case Study: Cavity
- Case Study: Using Surfaces
- Techniques for Mold Tooling

LESSON 8:**REUSABLE DATA**

- Reusing Data
- Task Pane
- SOLIDWORKS Resources
- Design Library
- File Explorer
- Case Study: 3D ContentCentral
- Library Features
- Case Study: Create A Library Feature
- Configurations in Library Features
- Case Study: Water Line
- 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