

Mold Design Using SOLIDWORKS

Length: 2 days

Prerequisite: 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.

Course Syllabus

Introduction

- About This Course
- Using this Book
- Windows
- SOLIDWORKS Plastics
- More SOLIDWORKS Training Resources

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 and Mold Design
- File Translations
- Why Do Imports Fail?
- SOLIDWORKS Import Options
- Case Study: Importing a STEP File
- Comparing Geometry
- Addressing Translation Errors
- Case Study: Repairing and Editing Imported Geometry
- Procedure 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 Shu-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





- 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

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





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