

SOLIDWORKS Mold Design Course

LENGTH: 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.



Topics covered in this course are:

Introduction

- About This Course
- Using this Book
- Windows® 7
- Use of Color
- Icons
- SOLIDWORKS Plastics
- Hide/Show Tree Items
- Course Overview

Lesson 1: Surface Concepts and Imported Geometry

- Importing Data
- 3D Model Types
- Definitions
- Case Study: Solids vs. Surfaces
- Terminology
- File Translators
- Modeling Systems
- File Translation
- Why Do Imports Fail?
- Diagnosis and Repair
- Case Study: Repairing and Editing Imported Geometry
- Checking Solid Bodies
- Making Copies of Faces
- Case Study: Import Diagnostics
- Repairing Gaps
- Repairing Faces

Lesson 2: Core and Cavity

- Core and Cavity Mold Design
- Case Study: A Simple Two Plate Mold Design
- SOLIDWORKS Mold Tools
- Mold Analysis Tools
- Analyzing Draft on a Model
- Draft Analysis Colors
- Scale the Part to Allow for Shrinkage
- Determine the Parting Lines
- Manual Selection Of Parting Lines
- Automation
- Modeling the Parting Surfaces
- Smoothing the Parting Surface
- Surface Bodies
- Interlocking the Mold Tooling
- Creating the Mold Tooling

Lesson 3: Side Cores and EDM Design

- Multiple Parting Directions
- Trapped Molding Areas
- Side Cores
- Feature Freeze
- Lifters
- Core Pins
- Case Study: Electrode Design
- Electrode Clearances
- Keeping the Sharp Edges

Lesson 4: Advanced Parting Lines, Shut-Off Surfaces, and Cores

- Parting Lines and Shut-Off Surfaces
- Case Study: Mixer Base
- Draft Analysis Options
- Parting Line Options
- Core and Cavity Surfaces
- Shut-Off Surfaces
- Parting Surface
- Tooling Split
- Seeing Inside the Mold
- Case Study: Splitting a Part

Lesson 5: Using Surfaces for Model Prep and Interlocks

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

Lesson 6: Using Surfaces for Mold Design Features

- Surfaces for Mold Design Features
- Case Study: Router Bottom The Mixer
- Case Study: Mixer Upper Half
- Case Study: Mixer Rear Housing
- Mold Split Folders

Lesson 7: Alternate Methods for Mold Design

- Alternate Methods for Mold Design
- Using Combine and Split
- Creating a Cavity
- Case Study: Cavity
- Using Surfaces
- Using the Up To Surface Method
- Using the Split Method
- Manually Creating Shut-off Surfaces

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Lesson 8: Reusable Data

- Reusing Data
- Design Library
- Task Pane
- Case Study: 3D ContentCentral
- Library Features
- Case Study: Create A Library Feature
- Configurations in Library Features
- Case Study: Water Line
- Smart Components



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Lesson 9:

Completing the Mold Base

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



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