

Course Duration: 2 days

Prerequisites: SolidWorks Essentials, Advanced Part Modeling

Description: Mold Design Using SolidWorks teaches you several manual mold creation techniques and how to use the Mold Tools in SolidWorks

Lesson 1: Core and Cavity

Core and Cavity Mold Design
SolidWorks Mold Tools
Problematic File Translations
Mold Analysis Tools
Analyzing Draft on a Model
Draft Analysis Colors
Adding Draft
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 2: Multiple Parting Directions

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

Lesson 3: Importing and Repairing Geometry

Beyond the Basics
Importing Data
3D Model Types
Geometry vs. Topology
What is a Solid?
Creating Solids from Surfaces
Decomposing a Solid into Surfaces
Surface Types
Terminology
File Translators
Modeling Systems
File Translation
Why Do Imports Fail?
Diagnosis and Repair
Checking Solid Bodies
Making Copies of Faces
Repairing Gaps
Repairing Faces

Lesson 4: Parting Lines and Shut-Off Surfaces

Parting Lines and Shut-Off Surfaces
Draft Analysis Options
Parting Line
Core and Cavity Surfaces
Shut-Off Surfaces
Parting Surface
Tooling Split
Seeing Inside the Mold
Undercut Analysis
Cores
Ejector Pins

Lesson 5: Repairs and Surfaces

Creating New Drafted Faces
Interlock Surfaces

Lesson 6: Using Surfaces

Surfaces in Mold Making
Creating Surface Bodies from Faces
Organizing Surfaces
Review
Manual Shut-off Surface
Side Cores
Partial Parting Lines

Lesson 7: Reusable Data

Reusing Data
Library Features
Smart Components
3D ContentCentral
Design Library
Task Pane
Library Features
Smart Components

Lesson 8: Alternate Methods for Mold Design

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

Lesson 9: Making a Complete Mold

Developing a Plan
Modeling Repairs
Mold Split Folders
Runners and Gates
Side Cores
Ejector Pins
Core Pins
Creating Individual Parts
Moldbase
Organizing the Assembly
Ejector Pins
Cooling the Mold
Making the Drawing
Making Changes
Completing the Process



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