

Mold Design Using SOLIDWORKS

Course Outline

 DURATION/TIME 3 Days 9:00 am - 5:00 pm	 METHODOLOGY Practical hands-on with using computers, lecturing, discussions and case studies.
 PREREQUISITES Experience with the Windows™ Operating System. Attended SOLIDWORKS Advanced Part Modeling training course	 TARGET Application Engineer, R&D Engineer, Product Designer or Engineer, and Industrial Engineer

INTRODUCTION

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

OBJECTIVE

At the end of this program participants are expected to:

- Create mold assemblies derived from your part designs
- Automate the production of the mold to save you design time
- Incorporate lifters, side cores and core pins in your mold design
- Design Electrodes for your molds

CONTACT

IME CADCAM RESOURCE CENTRE SDN BHD
Certified ISO 9001:2015 QMS

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DAY 1

Course Outline:

Lesson 1: Surface Concepts and Imported Geometry

- Course Overview
- 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
- Case Study: Importing a STEP File
- Comparing Geometry
- Addressing Translation Errors
- Repairing and Editing Imported Geometry
- Procedure for Rebuilding Fillets
- Sharing a Model

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 Surfaces
- Surfaces 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

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DAY 2

Course Outline:

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: Router Bottom
- Case Study: Drill Bezel

Lesson 6: Advanced Surfacing for Mold Design

- Surfacing Modelling for Mold Design
- Case Study: Mixer Rear Housing
- The Mixer
- Case Study: Mixer Handle

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DAY 3

Course Outline:

Lesson 7: Alternative Methods for Mold Design

- Alternative Methods for Mold Design
- 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
- 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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