



SOLIDWORKS SURFACE MODELING

Who should attend:

Application Engineer
R&D Engineer
Product Designer or Engineer
Industrial Engineer

Prerequisites:

Attended SOLIDWORKS Essentials Course

Attended Advance Part Modeling Course

Basic understanding of part design and drafting

Mechanical Design Experience

Duration:

3 Days

Methodology:

Practical hands-on with using computers, lecturing, discussions and case studies

Introduction

Learning Surface Modeling unlocks the full potential of SOLIDWORKS as a modeling tool. You will learn how to fine-tune any small detail of a SOLIDWORKS model by controlling its topology; manipulating the “underlining” fabric of one or more faces in order to achieve the desired result. Hybrid modeling techniques, combining surfacing and solid methods are keys for creating complex shapes. A special lesson is dedicated to troubleshooting errors and repairing imported geometry.

Objective

At the end of this program participants are expected to:

- Create complex surface designs using Loft and Sweep
- Repair imported geometry using SOLIDWORKS Surfacing tools
- Repair imported geometry using SOLIDWORKS Surfacing tools
- Use a master part model to create different versions of your design

IME CADCAM TRAINING CENTRE SDN BHD

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SURFACE MODELING

Key Topics

Day 1

Course Outline:

Lesson 1: Understanding Surfaces

- Solids and Surfaces
- Working with Surface Bodies
- Why Use Surfaces?
- Continuity Explained
- Workflow with Surfaces

Lesson 2: Introduction to Surfacing

- Similarities Between Solid and Surface Modeling
- Basic Surfacing
- Flattening Surfaces

Lesson 3: Solid-Surface Hybrid Modeling

- Hybrid Modeling
- Using Surfaces to Modify Solids
- Interchanging Between Solids and Surfaces
- Performance Implications
- Surfaces as Construction Geometry
- Alternative to Trim
- Making Copies of Faces

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Key Topics

Day 2

Lesson 4: Repairing and Editing Imported Geometry

- Importing Data
- Repairing and Editing Imported Geometry

Lesson 5: Advance Surface Modeling

- Stages in the Process
- Ruled Surfaces
- Lofting Surfaces
- Modeling the Lower Half
- Conclusion
- Design Changes

Day 3

Lesson 6: Blends and Patches

- Complex Blends
- Smoothing Patches
- Boundary Surface
- Freeform Feature
- Corner Blends

Lesson 7: Master Model Techniques

- Introduction to Master Models
- Surface Master Model Technique
- Working with a Solid Master Model
- Specialized Features for Plastic Parts
- SOLIDWORKS Explorer

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