

# S SOLIDWORKS Surface Modeling

# OVERVIEW

CLASSROOM LENGTH: 2 days / INSTRUCTOR-LED ONLINE LENGTH: 4 days

PREREQUISITES: We recommend completing the SOLIDWORKS Essentials and Advanced Part Modeling course.

**DESCRIPTION:** Surface Modeling is a two-day course that teaches you how to build free form shapes using SOLIDWORKS mechanical design automation software.

#### LESSON 1:

## **UNDERSTANDING SURFACES**

- Solids and Surfaces
- What is a Solid?
- Creating Solids from Surfaces
- Decomposing a Solid into 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**
- Alternative to Trim

#### LESSON 3:

#### SOLID-SURFACE HYBRID MODELING

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

## LESSON 4:

## REPAIRING AND EDITING

- Importing Data
- File Translation
- Why Do imports Fail?
- Importing a STEP File
- Geometry
- Importing Data
- Repairing and Editing Imported Geometry

## LESSON 5:

## **BLENDS AND PATCHES**

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

#### LESSON 6:

## **COMPLEX BLENDS**

- Complex Blends
- Freeform Feature

#### LESSON 7:

## ADVANCED SURFACE MODELING

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

#### LESSON 8:

## **MASTER MODEL TECHNIQUES**

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

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