

DesignPoint's SolidWorks training program focuses on the unique training needs of each customer offering convenient locations, manageable courses and knowledgeable instructors.

DesignPoint is a SolidWorks authorized training, testing & support center. Whether it's our offices, a local facility or at your site, DesignPoint's training classes are complete turnkey solutions. We provide all computers and training materials allowing the student to focus on learning.

We offer our courses in small, digestible segments. Classes are never more than three consecutive days, maximizing productivity while minimizing time away from the office.

All of our trainers are certified by SolidWorks for instruction and technical support and all have passed the Certified SolidWorks Professional (CSWP) exam. In addition, they are all certified examiners for the CSWP program.

SolidWorks Advanced Surface Modeling

The goal of this course is to teach you how to use surface features to build parts using SolidWorks software. Most of the case studies and exercises in this course are taken from consumer product design applications, and the lessons center around the combined use of solids and surfaces, with the goal always being to create a good solid.

During this course we will learn industry standard surfacing terminology necessary to understand a ground-up surface modeling approach, as well as answer some of the "when" and "why" questions which are inevitable with the solids to surfaces paradigm shift. If your modeling experience to date has been completely in the solids realm, you may find that working in surfaces requires a different approach. This course has several examples showing functions that do not ultimately create the intended geometry, necessitating an alternative approach. This is not to highlight shortcomings of the software, but rather to help you identify situations in which you need to try more than one method. Working with more complex models and shapes means you will run into more situations when you need to have at your disposal alternate methods for achieving particular shapes.

Prerequisites: SolidWorks Fundamentals I and II and minimum of 80 hours SolidWorks Modeling Time are required. SolidWorks Advanced Part Modeling is recommended.



Course Outline - 2 Days

Introduction to Surfacing

- What is solid?
- Working with Surface Bodies
- Why use Surfaces?
- Workflow with Surfaces

Solid-Surface Hybrid Modeling

- Hybrid Modeling
- Using Surfaces to Modify Solids
- Interchanging between Solids and Surfaces
- Surfaces as Construction Geometry
- Repairing and Editing Imported Geometry

Surface Modeling

- Stages in the Process
- Lofting Surfaces
- Modeling the Lower Half
- Filling in Gaps
- Design Changes

Blends and Patches

- Complex Blends
- Smoothing Patches
- Freeform Feature

Master Model Techniques

- Introduction to Master Models
- Surface Master Technique
- Working with a Solid Master Model

TRAINING CENTERS:

DESIGNPOINT SOLUTIONS
136 CENTRAL AVENUE
CLARK, NJ 07066
732.669.0055

DESIGNPOINT SOLUTIONS
1851 CHARTER LANE
LANCASTER, PA 17601
717.397.9707

SOLIDWORKS REGIONAL OFFICE
300 WEST STATE STREET
3RD FLOOR
MEDIA, PA 19063
610.355.0551

AVAILABLE COURSES:

SOLIDWORKS

- FUNDAMENTALS PART 1
- FUNDAMENTALS PART 2
- ADVANCED ASSEMBLY MODELING
- ADVANCED PART MODELING
- ADVANCED SURFACE MODELING
- MOLD DESIGN USING SOLIDWORKS
- SHEET METAL
- WELDMENTS
- FILE MANAGEMENT
- ROUTING
- API FUNDAMENTALS

PDMWORKS WORKGROUP
PDMWORKS ENTERPRISE

COSMOSWORKS DESIGNER
COSMOSWORKS PROFESSIONAL



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TRAINING

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Lesson 1:

Introduction to Surfacing

- What is solid?
 - Behind the Scenes
- Working with Surface Bodies
- Checking for a Closed Surface
- Parameterization
- Surface Types
- Feature History in an IGES File?
- Why use Surfaces?
 - When not to use Surfaces
 - Mixing Metaphors: Hybrid Modeling
- Workflow with Surfaces
- Working with Images
- Layout Sketch
- Identify Symmetry and Edges
- Identify Functional Faces
- Check your Models Frequently
- Folders in the FeatureManager
- Clean-up

Lesson 2:

Solid-Surface Hybrid Modeling

- Hybrid Modeling
- Using Surfaces to Modify Solids
- Interchanging between Solids and Surfaces
- Surfaces as Construction Geometry
 - Stages in the Process
- Repairing and Editing Imported Geometry
- Editing Imported Parts

Lesson 3:

Surface Modeling

- Stages in the Process
- Using Sketch Picture to Capture Design Intent

- Lofting Surfaces
- Modeling the Lower Half
- Filling in Gaps
 - Preparation for Using Filled Surface
 - Creating a Knit Surface
- Design Changes
 - Dynamic Feature Editing
 - Replacing a Face

Lesson 4:

Blends and Patches

- Complex Blends
 - Stages in the Process
 - Fill Surface Edge Selection
- Smoothing Patches
 - Three Alternative Approaches
 - Analysis Techniques
- Freeform Feature
 - Using the Triad
 - Undoing Changes
 - Boundary Conditions

Lesson 5:

Master Model Techniques

- Introduction to Master Models
 - Push and Pull type Operations
 - Workaround for Split Feature
 - Summary of Recommendations
- Surface Master Technique
- Working with a Solid Master Model
 - Splitting the Part
 - Modeling the Keypad
 - Reveal
 - Draft Analysis
 - Fastening Features

