



Computer Aided Design Using SolidWorks Course Curriculum

Chapter 1: Introduction

- a. Introduction to CAD/CAM /CAE
- b. Parametric Design, Associative, Feature Based Modeling, Design Intent
- c. System Requirements
- d. Graphic User Interface of SolidWorks
- e. Getting Started With SolidWorks
- f. File References

Chapter 2: Introduction to Sketching

- a. Getting Started with 2D Sketching
- b. Sketching Entities
- c. Sketch Relations
- d. Dimensions
- e. Sketch Fillets & Trimming Entities
- f. Mirror, Convert & Move Entities
- g. Sketch Tools

Chapter 3: Basic Part Modeling

- a. Part Modeling Terminology
- b. Creation of Features
- c. Extrude-Boss & Cut
- d. Revolved-Boss & Cut
- e. View Toolbar
- f. Creation of Reference Geometry
- g. Using the Hole Wizard
- h. Applying Fillets & Chamfers

- i. Mass Properties, Measure

Chapter 3: Advanced Part Modeling

- a. Boss Features
- b. Adding Rib ,Draft ,Shell
- c. Patterning
- d. Editing Features
- e. Using Copy and Paste
- f. Edit Material & Document Properties
- g. Design Tables

Chapter 4: Basic Surface Modeling

- h. Basic Surfacing Tools
- i. Sweep ,Loft & Offset
- j. Filletting & Trimming Tools

Chapter 5: Assembly Mode

- a. Getting Started With Assembly
- b. Bottom-up Approach
- c. Adding Components
- d. Feature Manager Design Tree and Symbols
- e. Component Hiding and Transparency
- f. Sub-assemblies, Inserting Sub-assemblies
- g. Smart Mates
- h. Interference Detection
- i. Exploded Assemblies & Explode Line Sketch
- j. Using TolAnalyst

Chapter 6: Drafting

- a. Overview of Drafting
- b. Drawing Sheets and Views
- c. Adding Drawing Views
- d. View Settings, Drawing Properties
- e. DimXpert
- f. Moving and Deleting Dimensions
- g. Adding Annotations & Symbols
- h. Sheet Formats and Templates
- i. Assembly Drawing Views
- j. Bill of Materials and Tables

Chapter 7: Introduction to Sheet metal, Weldments

Chapter 8: Introduction to PhotoWorks

Chapter 9: Tips & Tricks

- a. File Management
- b. Export and Import of CAD Files
- c. Managing SolidWorks Environment

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Phone: +91-20-6400 7296, Mob. No.: +91-99224 40102, Email: training@infinitesolutionsindia.com,

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