

Autodesk Inventor 2012 Introduction to Solid Modeling

Course Objectives

The Inventor 2012 Introduction to Solid Modeling training guide instructs students in the best usage approaches for parametric design philosophy through a hands-on, practice-intensive curriculum. Students acquire the knowledge needed to complete the process of designing models from conceptual sketching, through to solid modeling, assembly design, and drawing production.

Who Should Attend / Prerequisites

As an introductory training guide, Inventor 2012 Introduction to Solid Modeling does not assume prior knowledge of any 3D modeling or CAD. Users should have a working knowledge of the following:

- Drafting, design, or engineering principles.
- Microsoft® Windows® 7, Microsoft® Windows® Vista or Microsoft® Windows® XP.

Course Outline

Introduction to Inventor

- Solid Modeling
- Inventor Fundamentals
- The Inventor Interface
- Model Manipulation

Creating the Base Feature

- Solid Base Features

Sketching Geometry

- Sketch Geometry

Additional Sketching Tools

- Advanced Editing Tools
- Using Existing Geometry
- Over-Dimensioned Sketches
- Sketch Preferences

Sketched Secondary Features

- Extruded Secondary Features
- Revolved Secondary Features
- Editing Sketched Secondary Features
- 3D Grip Modification

Creating Pick and Place Features

- Edge Chamfer
- Constant Fillets
- Variable Fillets
- Face Fillets
- Full Round Fillets
- Straight Holes
- Threads
- Editing Pick and Place Features
- Creation Sequence

Work Features

- Work Planes
- Work Axes
- Work Points

Equations

- Equations

- Parameters

Additional Features

- Face Draft
- Splitting a Face or Part
- Shells
- Ribs
- Bend Part

Model and Display Manipulation

- Reordering Features
- Inserting Features
- Suppressing Features
- Section Views
- Design Views

Fixing Problems

- Sketch Failure
- Feature Failure

Sweep Features

- Sweep Features

Loft Features

- Rail Lofts
- Center Line Lofts
- Advanced Loft Options

Duplication Tools

- Rectangular Sketch Patterns
- Circular Sketch Patterns
- Rectangular Feature Patterns
- Circular Feature Patterns
- Mirror Parts or Features
- Manipulate Patterns and Mirror Features

Feature Relationships

- Establishing Relationships
- Controlling Relationships
- Investigating Relationships
- Changing Relationships

Assembly Environment

- Assembling Components
- Content Center
- Assembly Browser
- Saving Files

Manipulating Assembly Display

- Moving and Rotating Assembly Components
- Suppressing Constraints
- Component Display
- Selection Options in Assemblies

Model Information

- Measurement Tools
- Model Properties
- Changing Part Units

Design Presentation and Animation

- Exploded View Presentations

Assembly Tools

- Replacing Components
- Restructuring Components
- Driving Constraints
- Contact Solver
- Interference
- Error Recovery

Assembly Parts and Features

- Assembly Parts
- Assembly Features

Working with Projects

- New Projects
- Resolving Links
- The Project Browser

Drawing Basics

- New Drawing Views
- Manipulating Views

Detailing Drawings

- Dimensions
- Parts List
- Balloons
- Styles and Standards
- Hatching

Assembly Bill of Materials

- Create Virtual Components

- Create Bill of Materials

Drawing Annotations

- Text
- Symbols
- Hole and Thread Notes
- Chamfer Notes
- Center Marks and Center Lines
- Hole Tables

- Revision Tables and Tags

Customizing Inventor

- Application Options
- Document Settings
- File Properties
- Productivity Tips

Course Duration: 5 Days (35 Hours)

Tuition: \$1625.00 / Student