

Learning Autodesk Inventor 2010

Duration:

4 Days

Learn the fundamental principles of 3D parametric part design, assembly design, and creating production-ready part and assembly drawings using Autodesk® Inventor®. Hands-on exercises representing real-world, industry-specific design scenarios are included.

Objectives:

Provide users with a thorough understanding of the principal 3D design, validation, and documentation processes necessary for developing products using Autodesk Inventor.

After completion, users will:

- Capture design intent by using the proper techniques and recommended workflows for creating intelligent 3D parametric parts.
- Create, place, and constrain custom and standard components in an assembly.
- Simulate mechanisms, animate assembly designs, and check for interferences.
- Document designs using base, projected, section, detail, and isometric drawing views.
- Document assemblies using standard and exploded drawing views.
- Follow drafting standards while dimensioning and annotating drawing views with automated balloons and parts lists.

Who Should Attend & Prerequisites:

This courseware is designed for new Autodesk Inventor users.

No previous CAD experience is necessary. However, before using this courseware, the student should have a working knowledge of the following:

- Drafting, design, or mechanical engineering principles.
- Microsoft® Windows® Vista, Microsoft® Windows® XP, or Microsoft® Windows® 2000.

Inventor Essentials Course Outline:

Day 1

Getting Started

- Autodesk Inventor User Interface
- View Manipulation
- Designing Parametric Parts

Basic Sketching Techniques

- Creating 2D Sketches
- Geometric Constraints
- Dimensioning Sketches

Basic Shape Design

- Creating Basic Sketched Features
- Intermediate Sketching
- Editing Parametric Parts
- 3D Grip Editing
- Creating Work Features
- Creating Basic Swept Shapes

Detailed Shape Design

- Creating Chamfers and Fillets
- Creating Holes and Threads
- Patterning and Mirroring Features
- Creating Thin-Walled Parts

Day 2

Assembly Design Overview

- Designing Assemblies
- Using Project Files in Assembly Designs

Placing, Creating, and Constraining Components

- Placing Components in an Assembly
- Constraining Components
- Placing Standard Components Using the Content Center
- Basic Part Design in an Assembly

Interacting with an Assembly

- Identifying Parts in an Assembly
- Analysis and Motion Tools
- Presenting Your Assembly

Day 3

Basic View Creation

- Drawing Creation Environment
- Base and Projected Views
- Section Views
- Cropped Views
- Detail Views
- Managing Views

Dimensions, Annotations, and Tables

- Automated Dimensioning Techniques
- Manual Dimensioning Techniques
- Annotating Holes and Threads
- Creating Centerlines, Symbols, and Leaders
- Revision Tables and Tags

Day 4

Annotating Assembly Drawings

- Assembly-centric Bill of Materials
- Creating and Customizing Parts Lists
- Creating Balloons

Drawing Standards and Resources

- Setting Drawing Standards
- Drawing Resources