

# Autodesk Inventor training course - Autodesk Inventor Essentials

## Course Description

Teaches 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.

**Course duration:** 4 days  
**Courseware provided:** Yes

## Objectives

To provide a thorough understanding of the principal 3D design, validation, and documentation processes necessary for developing products using Autodesk Inventor, including:

- Capturing design intent using proper techniques and recommended workflows for creating intelligent 3D parametric parts.
- Creating, placing, and constraining custom and standard components in an assembly.
- Simulating mechanisms, animating assembly designs and checking for interferences.
- Documenting designs using base, projected, section, detail and isometric drawing views.
- Documenting assemblies using standard and exploded drawing views.
- Following drafting standards while dimensioning and annotating drawing views with automated balloons and parts lists.

## Who Should Attend?

New Autodesk Inventor users.

## Prerequisites

Delegates should have a working knowledge of:

- 2D CAD drawing, or skills equivalent to those learned by attending our [AutoCAD Essentials](#) training course.
- Drafting, design, or mechanical engineering principles.
- Microsoft® Windows®.

## 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
- Detail Views
- Crop 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

**Please note:** Course topics may be modified by the instructor based upon the knowledge and skill level of the course participants.

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