Autodesk Inventor Essentials Part 1

Duration : 3 days

Course Overview

Delegates are introduced to the fundamental principles of 3D parametric part design. Learn how to create intelligent parametric parts by capturing design intent and how this helps to streamline the process of modifying and documenting designs.

Learn the fundamental principles and recommended workflows for creating 3D assemblies and learn the proper techniques and recommended workflows for creating, placing, and constraining custom and standard components in an assembly.

Delegates learn the proper techniques and recommended workflows for creating base, projected, section, detail, and isometric views of 3D parts and assemblies. Students will also learn how to define and follow drafting standards while dimensioning and annotating drawing views.

Target Audience

This course covers the essentials of 3D parametric design for new users of Autodesk Inventor.

Prerequisites

Some design or engineering experience. It is recommended that you have a working knowledge of Microsoft supporting systems.

Objectives

Upon successful completion of this course, delegates will be able to:

- Understand the fundamental concepts, workflows, and benefits of 3D parametric part and assembly design using Autodesk Inventor
- Locate and navigate the Autodesk Inventor user interface and the multiple design and documentation environments
- Start designing simple parts and assemblies using basic sketching and modelling tools
- Create basic engineering drawings from 3D part and assembly models
- Annotate drawings by adding dimensions, text and balloons.
- Update drawings as changes are made to the 3D model

Course Content Part 1

Introduction
Understanding the User Interface
Understanding the Basics of Project Files

Parametric Part Design and Basic Sketching
Designing Parametric Parts
Creating 2D Sketches
Geometric Constraints
Dimensioning Sketches
Basic Shape Design
Creating Basic Sketched Features
Intermediate Sketching
Editing Parametric Parts
Creating Work Features

Detailed Shape Design
Creating Chamfers and Fillets
Creating Holes and Threads
Patterning and Mirroring Features

Placing, Creating, and Constraining Components
Placing Existing Components in an Assembly
Constraining Components
Placing Standard Components Using the Content Centre
Basic Part Design in the Context of an Assembly

Basic View Creation
Drawing Creation
Environment
Base and Projected Views
Section Views
Detail Views
Broken Views
Managing Views

Dimensions, Annotations, and Tables
Manual Dimensioning Techniques
Holes and Thread Notes
Creating Centrelines
Creating Leaders and Text
Creating Parts List
Creating Balloons

Drawing Standards and Resources
Setting Drawing Standards
Drawing Resources