

Autodesk Inventor training course - Simulation

Course Description

Teaches the fundamental principles and recommended workflows for analysing designs and creating dynamic simulations of mechanisms using Autodesk® Inventor™. Delegates learn how to validate digital prototypes by simulating the operation of mechanisms and motorised assemblies. They also learn how to analyse parts and assemblies, perform parametric design studies, and use modal analysis. Delegates work on practical exercises representing real-world, industry-specific design scenarios.

Course duration: 2 days
Courseware provided: Yes

Objectives

To introduce delegates to the user interface, tools, and recommended workflows in the Autodesk Inventor Dynamic Simulation and Stress Analysis environments, including:

- Validating digital prototypes by creating dynamic simulations of mechanisms using joints and environmental constraints.
- Eliminating redundancies in a design.
- Interpreting Dynamic Simulation results.
- Analysing parts and assemblies and performing parametric design studies.
- Practicing solving real-world design problems.

Who Should Attend?

Experienced Autodesk Inventor users.

Pre-requisites

Delegates should have completed an *Autodesk Inventor Essentials* course or be familiar with the concepts taught in this course, and have a working knowledge of:

- Complex assembly design using Autodesk Inventor.
- Mechanical engineering or engineering analysis principles.

Course Outline

Introduction to Engineering Analysis

- Dynamic Simulation Overview
- Stress Analysis Overview

Dynamic Simulation

- Creating Joints
- Environmental Constraints
- Running Simulations and Analyzing Results

Stress Analysis

- Creating Loads and Constraints
- Running an Analysis and Analyzing Results
- Sharing Dynamic Simulation Results with Stress Analysis
- Parametric Design Studies
- Assembly Level Analysis
- Modal Analysis

Stress Engineering Problems and Solutions

- Solving Design Problems

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

