

Autodesk Inventor Professional 2010 Simulation

Course Objectives

The primary objective of this course is to introduce students to the user interface, tools, and recommended workflows in the Autodesk Inventor Professional 2010 Dynamic Simulation and Stress Analysis environments.

After completing this course, students will be able to:

- Validate digital prototypes by creating dynamic simulations of mechanisms using joints and environmental constraints.
- Eliminate redundancies in a design.
- Interpret Dynamic Simulation results.
- Analyze parts and assemblies and perform parametric design studies.
- Practice solving real-world design problems.

Who Should Attend / Prerequisites

This course is designed for experienced Autodesk Inventor users. Users should have completed a *Learning Autodesk Inventor 2010* course and have a working knowledge of the following:

- Complex assembly design using Autodesk Inventor.
- Mechanical engineering or engineering analysis principles.
- Microsoft® Windows® Vista or Microsoft® Windows® XP.

Course Outline

Introduction to Engineering Analysis

- Stress Analysis Overview
- Dynamic Simulation Overview

Stress Analysis

- Preparing and Running a Simulation
- Viewing Results
- Analyzing Assemblies

- Performing a Parametric Design Study
- Mesh Control and Convergence
- Performing a Modal Analysis

Dynamic Simulation

- Creating Joints
- Defining Loads and Joint Properties
- Running Simulations and Analyzing Results

- Building Nonredundant Models
- Sharing Dynamic Simulation Results with Stress Analysis

Engineering Problems and Solutions

- Solving Design Problems

Course Duration: 2 Days

Tuition: \$500.00 / Student