



Autodesk Inventor Professional 2010 Simulation

Learn the fundamental principles and recommended workflows for analyzing designs and creating dynamic simulations of mechanisms using Autodesk® Inventor® Professional 2010. Users learn how to validate digital prototypes by simulating the operation of mechanisms and motorized assemblies. They also learn how to analyze parts and assemblies, perform parametric design studies, and use modal analysis. Hands-on exercises representing real-world, industry-specific design scenarios are included.

Objectives

To introduce users to the user interface, tools, and recommended workflows in the Autodesk Inventor Professional 2010 Dynamic Simulation and Stress Analysis environments. After completing this class, users 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.

Duration

2 days

Who should attend?

Experienced Autodesk Inventor users.

Pages

272

Typical Schedule

Unless otherwise noted on your class registration e-mail, this class starts each day at 9:00 am and ends at 4:00 pm.

Prerequisites

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.

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

M2 Technologies is the leading manufacturing design solutions provider in the Northeast. We specialize in providing solutions that deliver on the business value of digital prototyping to all size companies. For more information on M2 or to speak with our Training Coordinator, call 877.311.6284.