

Autodesk Inventor Professional 2009 Dynamic Simulation and Stress Analysis

Duration:**1 Day**

Using hands-on exercises representing real-world, industry-specific design scenarios, students learn the fundamental principles and recommended workflows for creating dynamic simulations of mechanisms using Autodesk® Inventor™ Professional 2009. Students learn how to validate mechanical designs by simulating the operation of mechanisms and motorized assemblies. They also learn how to share important load information with the Stress Analysis environment.

Objectives:

The primary objective of this courseware is to introduce students to the user interface and tools in the Autodesk Inventor Professional 2009 Dynamic Simulation environment.

After completing this course, students will be able to:

- Validate mechanical designs by creating dynamic simulations of mechanisms using joints and environmental constraints.
- Eliminate redundancies in a design.
- Interpret Dynamic Simulation results.
- Share important load information with the Stress Analysis environment.

Who Should Attend & Prerequisites:

This courseware is designed for experienced Autodesk Inventor users.

Students should have completed an *Autodesk Inventor Essentials* course and have a working knowledge of the following:

- Complex assembly design using Autodesk Inventor.
- Mechanical engineering or engineering analysis principles.
- Microsoft® Windows® Vista, Microsoft® Windows® XP, or Microsoft® Windows® 2000.
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Inventor Professional 2009 Dynamic Simulation and Stress Analysis:

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

Engineering Problems and Solutions

- Solving Design Problems