

Autodesk Inventor Professional 2008 Dynamic Simulation and Stress Analysis

Courseware Description

This courseware covers the fundamental principles and recommended workflows for creating dynamic simulations of mechanisms using Autodesk® Inventor™ Professional 2008. 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.

Hands-on exercises representing real-world, industry-specific design scenarios are included.

Suggested Course Duration:	1 day
Pages:	TBD
Trial CD:	No
Onscreen Exercises Included?	Yes

Objectives

The primary objectives of this course are to introduce students to the user interface and tools in the Dynamic Simulation environment; and to teach students how to validate mechanical designs by creating dynamic simulations of mechanisms using joints and environmental constraints, eliminate redundancies in a design, interpret Dynamic Simulation results, and share important load information with the Stress Analysis environment.

Who Should Attend

This courseware is designed for experienced Autodesk Inventor users.

Prerequisites

Students should have completed the *Autodesk Inventor Essentials* course and have a working knowledge of complex assembly design using Autodesk Inventor. Mechanical engineering or engineering analysis experience is a plus. It is also recommended that the student have a working knowledge of Microsoft® Windows® XP or Microsoft® Windows® 2000.

Course Outline

Introduction to Dynamic Simulation

- Dynamic Simulation Overview

Simulation Model Creation

- Joints
- Creating Nonredundant Models
- Environmental Constraints

Engineering and Stress Analysis

- Using Dynamic Simulation for Engineering Analysis
- Analyzing Parts Using Finite Element Analysis
- Solving Design Problems with Dynamic Simulation and FEA

Note: The suggested course duration is a guideline. Course topics and duration may be modified by the instructor based upon the knowledge and skill level of the course participants.

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