REDSTACK™

THINKING BY DESIGN

Technical Education Services

Autodesk Inventor
Advanced Assembly Modeling

AUTODESK®
Official Training Guide

Course Length: 3 days

The Autodesk Inventor Advanced Assembly Modeling training guide builds on the skills acquired in the Autodesk Inventor Introduction to Solid Modeling and Autodesk Inventor Advanced Part Modeling training guides to take students to a higher level of productivity when creating and working with assemblies in the Autodesk® Inventor® software.

You begin by learning the concept of Top-Down Design for assembly creation. Planning the assembly using the Top-Down Design approach helps to create clean, reusable geometry that interacts as expected with the rest of the assembly. Throughout the training guide, you learn how various Autodesk Inventor tools can be used to achieve Top-Down Design practices in your assemblies using Derive, Multi-Body Design, and Layouts. Other advanced assembly topics include model simplification tools, Positional and Level of Detail Representations (including substitute), iMates and iAssemblies, Frame Generator, Design Accelerator, and file management and duplication techniques that aim to help you become more efficient when working with assemblies. Accurately communicating a design to all levels of a design team is important. A chapter has also been included on Autodesk Inventor Studio to teach you how to render, produce, and animate realistic images.

For the current course schedule and to register for this course:
Web: redstack.com.au
Phone: 1300 667 263

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The main topics covered in the training guide include:

- Applying motion to existing assembly constraints using Motion and Transitional Constraints.
- Introduction of the Top-Down Design technique for creating assemblies and its components.
- Inventor tools for Top-Down Design, including associative links, adaptive parts, multi-body design, layout design, derived components, and skeleton models.
- Creating Positional Representations of an assembly to review motion, evaluate the position of assembly components, or document an assembly in a drawing.
- Using Shrinkwrap and other model simplification tools to create a part model that represents an overall assembly.
- Creating Level of Detail Representations to reduce the clutter of large assemblies, as well as reduce your time spent waiting for your system to retrieve a large number of components in an assembly. You will also learn about Substitute Level of Detail Representations.
- Using the Design Accelerator to easily insert standard and customizable components and features into your model.
- Creating rendered realistic images and animations of parts and assemblies using Inventor Studio and the Video Producer.
- Using iMates and iAssemblies to work efficiently with assemblies.
- Using the Frame Generator to create members in a structural frame work.
- Using pattern, mirror, and copy techniques to duplicate components in an assembly.
- Working with weldments.
- Link system parameters and custom parameters to an external spreadsheet file and use it to drive parameters in the model. You will also learn about custom formatting and creating expression within a parameter.

Prerequisites:

The class assumes a mastery of Autodesk Inventor basics as taught in Autodesk Inventor Introduction to Solid Modeling. Autodesk Inventor Advanced Part Modeling is recommended.

Technical Education Services

Table of Contents

Day 1

Day 2

Chapter 8: Positional Representations
- Introduction to Positional Representations
- Create and Edit Positional Representations
- Using a Positional Representation

Chapter 9: Model Simplification
- Shrinkwrap
- Model Simplification

Chapter 10: Level of Detail Representations
- Level of Detail Representations
- System-Defined Level of Detail Representations
- User-Defined Level of Detail Representations
- Substitute Level of Detail Representations
- LOD Productivity Tools

Chapter 11: Design Accelerator
- Design Accelerator
- Generators
- Calculators
- Engineer's Handbook

Chapter 12: Advanced File Management
- Design Assistant
- Design Assistant Options
- Pack and Go
- Purging Old Files
- Copy Design using Autodesk Vault

Technical Education Services

Chapter 13: Inventor Studio

- Introduction to Inventor Studio
- Rendering
- Animation
- Video Producer
- Creating a Standard Room

Day 3

Chapter 14: iAssemblies

- Introduction
- Create Basic iAssemblies
- Create Multi-Level iAssemblies
- Create iAssemblies Using Existing Assemblies
- Place iAssemblies
- Edit iAssemblies

Chapter 15: Frame Generator

- Frame Generator
- Structural Shape Author

Chapter 16: Assembly Duplication Options

- Pattern Components
- Mirror Components
- Copy Components

Chapter 17: Working with Weldments

- Working with Weldments
- Fillet Welds
- Cosmetic Welds
- Groove Welds

Appendix A: Working with Spreadsheets and Parameters

- Spreadsheet-Driven Parameters
- Custom Parameters
- Custom Parameter Formatting & Expressions

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