IMAGINIT TECHNOLOGIES

Technical Education Services

Autodesk Inventor for Experienced 3D CAD Users

Course Length: 3 days

The Autodesk Inventor for Experienced 3D CAD Users training course is intended to provide accelerated introductory training in the Autodesk Inventor software. This training course can be used in a 3-day introductory training class and is designed for users that have 3D modeling design experience with other 3D CAD software packages (e.g., CATIA, Pro/ENGINEER, Creo Parametric, NX, SolidWorks, etc.).

By leveraging the experience users gain in working with other 3D modeling software packages, this hands-on, practice-intensive curriculum is developed so that new users in the Autodesk Inventor software can benefit from a shorter introductory level training course. The new user is taught how to find and use the modeling tools associated with familiar modeling strategies that are used in other 3D CAD software. Users of this student guide acquire the knowledge required to complete the process of creating models from conceptual sketching, through to solid modeling, assembly design, and drawing production.

Topics Covered

- The Autodesk Inventor software interface
- Obtaining model information
- Creating sketch and pick and place features
- Work Features
- Creating equations and working with parameters
- Model geometry and model display manipulation
- Feature duplication techniques
- Placing and constraining parts in assemblies
- Assembly component display
- Presentation files (Exploded views and Animations)
- Assembly tools
- Creating parts and features in assemblies
- Creating and editing assembly Bill of Materials
- Working with projects
- Creating and annotating drawings and views

Prerequisites

As an accelerated introductory training course, Autodesk Inventor for Experienced 3D CAD Users assumes prior knowledge of 3D modeling and other 3D CAD software. Users with AutoCAD or AutoCAD Mechanical experience are recommended to use the Autodesk Inventor Introduction to Solid Modeling training course.

Course description shown for Autodesk Inventor 2018. Topics, curriculum, and/or prerequisites may change depending on software version.

Training Guide Contents

Chapter 1: Introduction to Autodesk Inventor

- 1.1 Getting Started
- 1.2 Autodesk Inventor Interface
- 1.3 Model Manipulation
- 1.4 Model Information

Chapter 2: Sketching Geometry

- 2.1 Creating a New Part File
- 2.2 Creating a Sketch
- 2.3 Sketch Geometry
- 2.4 Constraints
- 2.5 Dimensions
- 2.6 Additional Sketching Tools

Chapter 3: Creating Sketched Features

- 3.1 Extrude Features
- 3.2 Revolve Features
- 3.3 Sweep Features
- 3.4 Loft Feature
- 3.5 Editing Sketched Features

Chapter 4: Creating Pick and Place Features

- 4.1 Edge Chamfer
- 4.2 Constant Fillets
- 4.3 Face Fillets
- 4.4 Full Round Fillets
- 4.5 Straight Holes
- 4.6 Threads
- 4.7 Editing Pick and Place Features

Chapter 5: Work Features

- 5.1 Work Planes
- 5.2 Work Axes
- 5.3 Work Points

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Chapter 6: Additional Features

- 6.1 Face Draft
- 6.2 Splitting a Face or Part
- 6.3 Shells
- 6.4 Ribs
- 6.5 Reordering Features
- 6.6 Inserting Features

Chapter 7: Equations

- 7.1 Equations
- 7.2 Parameters

Chapter 8: Duplication Tools

- 8.1 Rectangular Sketch Patterns
- 8.2 Circular Sketch Patterns
- 8.3 Rectangular Feature Patterns
- 8.4 Circular Feature Patterns
- 8.5 Sketched Driven Patterns
- 8.6 Mirror Parts or Features
- 8.7 Manipulate Patterns and Mirror Features

Chapter 9: Assembly Environment

- 9.1 Assembling Components Using Constraints
- 9.2 Assemble Mini-Toolbar
- 9.3 Content Center
- 9.4 Assembly Browser
- 9.5 Saving Files

Chapter 10: Joint Connections

- 10.1 Assembling Components Using Joints

Chapter 11: Manipulating Assembly Display

- 11.1 Moving and Rotating Assembly Components
- 11.2 Suppressing Constraints
- 11.3 Component Display
- 11.4 Selection Options in Assemblies

Chapter 12: Presentation Files

- 12.1 Creating Presentations
- 12.2 Storyboards
- 12.3 Snapshot Views
- 12.4 Publishing a Presentation File

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Chapter 13: Assembly Tools

- 13.1 Replacing Components
- 13.2 Duplicating Components
- 13.3 Restructuring Components
- 13.4 Driving Constraints
- 13.5 Contact Solver
- 13.6 Interference
- 13.7 Error Recovery

Chapter 14: Assembly Parts and Features

- 14.1 Assembly Parts
- 14.2 Assembly Features

Chapter 15: Assembly Bill of Materials

- 15.1 Create Virtual Components
- 15.2 Create Bill of Materials

Chapter 16: Working With Projects

- 16.1 Project Files
- 16.2 Resolving Links

Chapter 17: Drawing Basics

- 17.1 Creating a New Drawing
- 17.2 Base and Projected Views
- 17.3 Additional Drawing Views
- 17.4 Manipulating Views

Chapter 18: Detailing Drawings

- 18.1 Dimensions
- 18.2 Drawing Sheets
- 18.3 Parts List
- 18.4 Balloons
- 18.5 Styles and Standards
- 18.6 Hatching

Chapter 19: Drawing Annotations

- 19.1 Text
- 19.2 Symbols
- 19.3 Hole and Thread Notes
- 19.4 Chamfer Notes
- 19.5 Center Marks and Center Lines
- 19.6 Hole Tables
- 19.7 Revision Tables and Tags

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Appendix A: Sketching Options

- A.1 Sketch Geometry Creation Options
- A.2 Sketch Editing Options
- A.3 Sketch Constraint Options
- A.4 Dimension Type Options

Appendix B: Customizing Autodesk Inventor

- B.1 Application Options
- B.2 Document Settings
- B.3 File Properties
- B.4 Changing Part Units
- B.5 Command Customization

Appendix C: Additional Practices

Appendix D: Autodesk Inventor Certification Exam Objectives

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Cancellation Policy

The following cancellation policy shall apply to all training engagements, Live Online, Consulting Services and Dedicated/Custom Training:

- Company reserves the right to reschedule or cancel the date, time and location of its class at any time. In the event that a Training Class is cancelled by Company, Customer is entitled to a full refund. Company shall not be responsible for any other loss incurred by Customer as a result of a cancellation or reschedule.
- For Customer cancellations when written notice is received (i) at least ten (10) business days in advance of the class, the Customer is entitled to a full refund of its payment or reschedule enrollment, (ii) less than ten (10) business days, Customer shall not be entitled to a refund, but shall receive a class credit to be used within three (3) months of the date of the original class.
- Student substitutions are acceptable with at least two (2) days prior notice to the class, provided substitution meets course prerequisites and is approved by Company's Training Coordinator (trainingcoordinator@rand.com)
- For all Training orders, cancellation notices must be submitted to trainingcoordinator@rand.com. Company is not responsible for any error in the delivery of the email notice. In the event of any reschedule of Consulting Services and/or Dedicated/Custom Training by Customer, Company will invoice Customer for all non-cancellable travel expenses.

To request more information or to see training locations, visit www.imaginit.com/contact-us.

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