



Autodesk® Inventor® - Fundamentals

Brief Synopsis of Class Contents:

Autodesk® Inventor® 3D CAD software offers an easy-to-use set of tools for 3D mechanical design, documentation, and product simulation. In this introductory course, students acquire the knowledge needed to complete the process of designing models from conceptual sketching, through to solid modeling, assembly design, and drawing production. This course is intended as an introductory training guide. Autodesk® Inventor® Fundamentals does not assume prior knowledge of any 3D modeling or CAD software. Students do need to be experienced with the Windows operating system and a background in drafting of 3D parts is recommended.

Learning Objectives:

- Navigate the Autodesk® Inventor® user interface
- Generating 3D parts from sketches
- Placing and constraining/connecting parts in assemblies
- Assembly bill of materials
- Creating and annotating drawings and views

Courseware:

Ascent Autodesk Inventor Introduction to Solid Modeling

Number of Days:

8 Half Day Sessions

Continuing Education Hours:

32 hours

Who Should Attend:

This course is designed to teach new users the fundamental features of Autodesk® Inventor®.

Prerequisites:

Experienced with the Windows operating system and a background in drafting of 3D parts is recommended

System and Software Requirements:

<http://www.asti.com/LiveLab-Learning-amp-Training/LiveLab-System-Requirements>

FAQs and Cancellation Policy:

<http://www.asti.com/LiveLab-Learning-amp-Training/LiveLab-FAQS>

Class Outline and Topics:

Chapter 1: Introduction to Autodesk Inventor

- Introduction
- Autodesk Inventor Fundamentals
- Getting Started
- Autodesk Inventor Interface
- Model Manipulation

Chapter 2: Creating the Base Feature

- Creating a New Part File
- Sketched Base Features
- Editing Sketched Features

Chapter 3: Additional Sketching Tools

- Additional Entity Types
- Basic Editing Tools
- Additional Constraint Tools
- Additional Dimension Tools

Chapter 4: Advanced Sketch Editing Tools

- Advanced Editing Tools
- Rectangular Sketch Patterns
- Circular Sketch Patterns

Chapter 5: Sketched Secondary Features

- Sketched Secondary Features
- Using Existing Geometry

Chapter 6: Creating Pick and Place Features

- Edge Chamfer
- Constant Fillets
- Variable Fillets
- Full Round Fillets
- Straight Holes
- Threads

- Editing Pick and Place Features
- Creation Sequence

Chapter 7: Work Features

- Work Planes
- Work Axes
- Work Points

Chapter 8: Equations

- Equations
- Parameters

Chapter 9: Additional Features

- Face Draft
- Splitting a Face or Part
- Shells
- Ribs

Chapter 10: Model and Display Manipulation

- Reordering Features
- Inserting Features
- Suppressing Features
- Section Views
- Design Views

Chapter 11: Fixing Problems

- Sketch Failure
- Feature Failure

Chapter 12: Sweep Features

- Sweep Features

Chapter 13: Loft Features

- Rail and Center Line Lofts
- Advanced Loft Options

Chapter 14: Duplication Tools

- Rectangular Feature Patterns
- Circular Feature Patterns
- Sketched Driven Patterns
- Mirror Parts or Features
- Manipulate Patterns and Mirror Features

Chapter 15: Feature Relationships

- Establishing Relationships
- Controlling Relationships
- Investigating Relationships
- Changing Relationships

Chapter 16: Assembly Environment

- Assembling Components Using Constraints
- Assembly Mini-Toolbar
- Assembly Browser
- Saving Files

Chapter 17: Joint Connections

- Assembling Components Using Joints

Chapter 18: Manipulating Assembly Display

- Moving and Rotating Assembly Components
- Suppressing Constraints
- Component Display

Chapter 19: Model Information

- Measurement Tools
- Model Properties

Chapter 20: Presentation Files

- Creating Presentations
- Storyboards
- Snapshot Views
- Publishing a Presentation File

Chapter 21: Assembly Tools

- Replacing Components
- Duplicating Components
- Restructuring Components
- Driving Constraints
- Contact Solver
- Interference
- Error Recovery

Chapter 22: Assembly Parts and Features

- Assembly Parts
- Assembly Features

Chapter 23: Assembly Bill of Materials

- Create Virtual Components
- Create Bill of Materials

Chapter 24: Working with Projects

- Project Files
- Resolving Links

Chapter 25: Drawing Basics

- Creating a New Drawing
- Base and Projected Views
- Additional Drawing Views
- Manipulating Views

Chapter 26: Detailing Drawings

- Dimensions
- Drawing Sheets
- Parts List
- Balloons
- Styles and Standards
- Hatching

Chapter 27: Drawing Annotations

- Text
- Symbols
- Hole and Thread Notes
- Chamfer notes
- Center Marks and Center Lines
- Hole Tables
- Revision Tables and Tags

Chapter 28: Customizing Autodesk Inventor

- Application Options
- Document Settings
- File Properties
- Changing Part Units
- Command Customization

