



## Autodesk® Inventor® – Advanced Assembly Modeling

### 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 course, we continue building on the skills acquired in the Autodesk Inventor Fundamentals and Autodesk Inventor Advanced Part Modeling training courses to take students to a higher level of productivity when creating and working with assemblies in the Autodesk® Inventor® software.

### Learning Objectives:

- Top-Down Design
- Layout Design
- Positional Representations
- Level of Detail Representations
- Design Accelerators
- iAssemblies
- Frame Generator
- Weldments

### Courseware:

Ascent Autodesk Inventor Advanced Assembly Modeling

### Number of Days:

4 Half Day Sessions

### Continuing Education Hours:

16 hours

### Who Should Attend:

This courseware is designed to teach users the advanced elements of Assembly Modeling using Autodesk® Inventor®.

### Prerequisites:

The class assumes a mastery of Autodesk Inventor basics as taught in Autodesk Inventor Fundamentals. Autodesk Inventor Advanced Part Modeling 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: Working Effectively with Assemblies

- General Assembly Tips
- Relationship Tips
- Motion Constraints
- Transitional Constraints

### Chapter 2: Introduction to Top-Down Design

- Top-Down Design Process
- Top-Down Design Tools

### Chapter 3: Derived Components

- Derived Components
- Modify Derived Components

### Chapter 4: Multi-Body Part Modeling

- Multi-Body Part Modeling

### Chapter 5: Layout Design

- Layout Design

### Chapter 6: Associative Links and Adaptive Parts

- Associative Links
- Adaptive Assembly Parts

### Chapter 7: iMates

- iMates

### Chapter 8: Positional Representations

- Introduction to Positional Representations
- Create and Edit Positional Representations
- Use Positional Representations

### Chapter 9: Model Simplification

- Shrinkwrap
- Assembly Simplification

### Chapter 10: Level of Detail Representations

- Level of Detail Representations
- System-Defined dLevel of Detail Representations
- User-Defined Level of Detail Representations
- Using Level of Detail Representations
- Substitute Level of Detail Representations
- LOD Productivity

### Chapter 11: Design Accelerator

- Design Accelerator
- Generators
- Calculators
- Engineer's Handbook

### Chapter 12: Advanced File Management

- Design Assistant
- Pack and Go
- Purging Old Files

### Chapter 13: Inventor Studio

- Rendering
- Animation
- Video Producer
- Creating a Standard Room

### 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

