

Autodesk® Inventor® – Advanced Part 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 consider various approaches to part design and emphasize useful strategies. This course assumes a mastery of Autodesk® Inventor® basics as taught in Autodesk® Inventor® Fundamentals. Students should know how to create and edit parts, use work features, and create and annotate drawing views, etc.

Learning Objectives:

- Advanced model appearance options
- Multi-body part modeling
- Analysis tools
- Creating and editing basic surfaces
- Advanced Drawing tools (tables for iParts, surfaces in drawing views, and custom sketched symbols)

Courseware:

Ascent Autodesk Inventor Advanced Part Modeling

Number of Days:

3 Half Day Sessions

Continuing Education Hours:

12 hours

Who Should Attend:

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

Prerequisites:

The material assumes a mastery of Autodesk® Inventor® basics as taught in Autodesk® Inventor® Fundamentals course. Students should know how to create and edit parts, use work features, and create and annotate

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: Tips & Tools

- Design Philosophies
- Sketching Tips
- Display Options
- Appearances

Chapter 2: Sketching Tools

- Splines
- 3D Sketches

Chapter 3: Multi-Body Part Modeling

- Multi-Body Part Modeling

Chapter 4: Advanced Work Features

- Grounded Work Points
- User Coordinate Systems

Chapter 5: Advanced Lofts, Sweeps, and Coils

- Area Lofts
- Advanced Sweeps
- Coils

Chapter 6: Analyzing a Model

- Analysis Types
- Analysis Procedures

Chapter 7: Generative Shape Design

- Shape Generator

Chapter 8: Introduction to Surfacing

- Introduction to Surfaces
- Basic Surfaces
- Patch Surfaces
- Ruled Surfaces

- Stitch Surfaces
- Sculpting with Surfaces
- Thickening & Offsetting a Surface
- Surfaces in Drawing Views

Chapter 9: Additional Surfacing Options

- Extend and Trim Surfaces
- Replace Face with a Surface
- Delete Faces
- Copy Surfaces

Chapter 10: Copying Between Parts (iFeatures)

- Creating iFeatures
- Inserting iFeatures
- iFeatures vs. Copy Feature
- Table-Driven iFeatures
- Editing iFeatures

Chapter 11: iParts

- iPart Creation
- iPart Placement
- Editing an iPart Factory
- Creating iFeatures from a Table-Driven iPart
- Tables for Factory Members

Chapter 12: Importing & Editing CAD Data

- Importing CAD Data
- Exporting Geometry
- Editing the Base Solid
- Direct Edit
- Attaching Point Cloud Data



Chapter 13: Working with Imported Surfaces

- Importing Surfaces
- Repairing Imported Surfaces

Chapter 14: Working with AutoCAD Data

- Opening AutoCAD Files
- DWG File Underlays
- Working with other Autodesk Product Files

Chapter 15: Introduction to Freeform Modeling

- Creating Freeform Geometry
- Editing Freeform Geometry

