

Autodesk Inventor Advanced Part Training Course

Course Overview

Course Length: 16-Hours

- 16-Hours – 4 x 2-hour training sessions
- Remote training over MS Teams
- Sessions are recorded and download links for each session are provided for future use
- Training for up to 1-3 people
- Sessions can start within 7 days upon ordering
- Flexible sessions (for example, consecutive or Monday, Wednesday, Friday)
- Courses are private and topics can be customised to suit
- Includes Certificate of Completion

The goal of this course is to build on the skills acquired in the Autodesk Inventor: Introduction to Solid Modelling training course by taking users to a higher level of productivity when designing part models using the Autodesk Inventor software.

In this course, the user considers various approaches to part design. Specific advanced part modelling techniques covered include: multi-body design, advanced lofts, advanced sweeps, coils, generative shape design, surface modelling, and Freeform modelling.

Material aimed at increasing efficiency includes: iFeatures for frequently used design elements, iParts for similar designs, and how to work with imported data. The course also covers some miscellaneous drawing tools, such as: custom sketches symbols, working with title blocks and borders, and documenting iParts.

Topics Covered

- Advanced model appearance options
- 2D and 3D sketching techniques
- Multi-body part modeling
- Advanced geometry creation tools (work features, area lofts, sweeps, and coils)
- Analysis tools
- Generative shape design using Shape Generator
- Creating and editing basic surfaces, importing surfaces, and surface repair tools
- iFeatures and iParts
- Importing data from other CAD systems and making edits
- Working with AutoCAD DWG files
- Freeform modelling
- Emboss and Decal features
- Advanced Drawing tools (iPart tables, surfaces in drawing views, and custom sketched symbols)

- Adding notes with the Engineer's Notebook

Prerequisites

The material assumes a mastery of Autodesk Inventor basics, as taught in Autodesk Inventor Introduction to Solid Modelling. Users should know how to create and edit parts, use work features, create and annotate drawing views, etc. The use of Microsoft Excel is required for this course

Training Guide Contents

Chapter 1: Tips & Tools

- 1.1 Design Philosophies
- 1.2 Sketching Tips
- 1.3 Display Options
- 1.4 Appearances

Chapter 2: Sketching Tools

- 2.1 Splines
- 2.2 3D Sketches

Chapter 3: Multi-Body Part Modelling

- 3.1 Multi-Body Part Modelling

Chapter 4: Advanced Work Features

- 4.1 Grounded Work Points
- 4.2 User Coordinate Systems

Chapter 5: Advanced Lofts, Sweeps, and Coils

- 5.1 Area Lofts
- 5.2 Advanced Sweeps
- 5.3 Coils

Chapter 6: Analysing a Model

- 6.1 Analysis Types
- 6.2 Analysis Procedures

Chapter 7: Generative Shape Design

- 7.1 Shape Generator

Chapter 8: Introduction to Surfacing

- 8.1 Introduction to Surfaces
- 8.2 Basic Surfaces
- 8.3 Patch Surfaces
- 8.4 Ruled Surfaces
- 8.5 Stitch Surfaces
- 8.6 Sculpting with Surfaces
- 8.7 Thickening & Offsetting a Surface
- 8.8 Surfaces in Drawing Views

Chapter 9: Additional Surfacing Options

- 9.1 Extend and Trim Surfaces
- 9.2 Replace Face with a Surface
- 9.3 Delete Faces
- 9.4 Copy Surfaces

Chapter 10: Copying Between Parts (iFeatures)

- 10.1 Creating iFeatures
- 10.2 Inserting iFeatures
- 10.3 iFeatures vs. Copy Feature
- 10.4 Table-Driven iFeatures
- 10.5 Editing iFeatures

Chapter 11: iParts

- 11.1 iPart Creation
- 11.2 iPart Placement
- 11.3 Editing an iPart Factory
- 11.4 Creating iFeatures from a Table-Driven iPart
- 11.5 Tables for Factory Members

Chapter 12: Importing & Editing CAD Data

- 12.1 Importing CAD Data (AnyCAD)
- 12.2 Exporting Geometry
- 12.3 Editing the Base Solid
- 12.4 Direct Edit
- 12.5 Attaching Point Cloud Data

Chapter 13: Working with Imported Surfaces

- 13.1 Importing Surfaces
- 13.2 Repairing Imported Surfaces

Chapter 14: Working with AutoCAD Data

- 14.1 Opening AutoCAD Files
- 14.2 DWG File Underlays

Chapter 15: Introduction to Freeform Modelling

- 15.1 Creating Freeform Geometry
- 15.2 Editing Freeform Geometry