Autodesk Inventor Sheet Metal Design

Course Length: 2 days

The Autodesk® Inventor® Sheet Metal Design training course introduces the concepts and techniques of sheet metal modeling with the Autodesk Inventor software.

The structure of the training course follows the typical stages of using the Autodesk Inventor software. That is, to create and edit sheet metal parts, generate flat patterns, and document the designs in drawings.

Topics Covered

- Autodesk Inventor Sheet Metal interface
- Sheet metal design process
- Creating base Faces, Contour Flanges, and Contour Rolls
- Creating secondary Faces, Contour Flanges, and Contour Rolls
- Sheet metal parameters
- Creating Flanges
- Creating Hems, Folds, and Bends
- Corner Rounds and Chamfers
- Sheet Metal Cuts (Holes, Cuts, and Punch Features)
- Corner Seams (Seams and Miters)
- Generating Flat Patterns
- Lofted Flanges
- Rips
- Unfolding and Refolding
- Multi-Body Sheet Metal Modeling
- Documentation and Annotation of drawings
- Converting solid models to sheet metal models
- Sheet Metal Styles

Prerequisites

- Prior knowledge of 3D solid part modeling using the Autodesk® Inventor® software.
- Familiarity with the Microsoft® Windows® operating system.
- A background in designing and drafting 3D parts is recommended.
- Knowledge of sheet metal processing is an asset, but not required.
Training Guide Contents

Chapter 1: Introduction to Sheet Metal Modeling
- 1.1 Sheet Metal Concepts
- 1.2 Sheet Metal Terminology
- 1.3 Sheet Metal Environment
- 1.4 Sheet Metal Design Process

Chapter 2: Sheet Metal Base Features
- 2.1 Applying Existing Sheet Metal Defaults
- 2.2 Creating a Face as a Base Feature
- 2.3 Creating a Contour Flange as a Base Feature
- 2.4 Creating a Contour Roll as a Base Feature

Chapter 3: Sheet Metal Secondary Features
- 3.1 Sheet Metal Parameters
- 3.2 Bend Relief Shapes
- 3.3 Faces as Secondary Features
- 3.4 Contour Flanges as Secondary Features
- 3.5 Contour Rolls as Secondary Features

Chapter 4: Flanges
- 4.1 Creating Flanges
- 4.2 Corner Relief Options

Chapter 5: Bending Sheet Metal
- 5.1 Hems
- 5.2 Folds
- 5.3 Bends

Chapter 6: Corner Rounds and Chamfers
- 6.1 Creating Corner Rounds
- 6.2 Creating Corner Chamfers

Chapter 7: Sheet Metal Cuts
- 7.1 Creating Cut Features
- 7.2 Creating Straight Holes
- 7.3 Using Punch Tool Features
- 7.4 Creating a Punch Tool
- 7.5 Cuts Using Surfaces

Course description shown for Autodesk Inventor 2017. Topics, curriculum, and/or prerequisites may change depending on software version.
Chapter 8: Corner Seams

- 8.1 Creating Corner Seams and Miters
- 8.2 Creating Corner Rips
- 8.3 Converting Corner Seams and Bends

Chapter 9: Flat Pattern Environment

- 9.1 Creating Flat Patterns
- 9.2 Orienting Flat Patterns
- 9.3 Punch Representations
- 9.4 Bend Angle
- 9.5 Flat Pattern Cleanup
- 9.6 Exporting to DXF/DWG

Chapter 10: Lofted Flange and Rips

- 10.1 Lofted Flange
- 10.2 Rip

Chapter 11: Unfold and Refold

- 11.1 Unfold and Refold

Chapter 12: Multi-Body Sheet Metal Modeling

- 12.1 Multi-Body Modeling

Chapter 13: Documentation and Annotation

- 13.1 Sheet Metal Drawing Terminology
- 13.2 Creating Sheet Metal Drawings
- 13.3 Bend & Punch Notes
- 13.4 Bend Tables
- 13.5 Punch Tables
- 13.6 Bend Order
- 13.7 Cosmetic Centerlines

Chapter 14: Converting Parts to Sheet Metal

- 14.1 Converting Solid Models to Sheet Metal
- 14.2 Non-Ruled Surfaces

Appendix A: Sheet Metal Rules

- A.1 Working with Sheet Metal Rules
- A.2 Sheet, Bend, and Corner Tab Options
- A.3 Bend Tables

Appendix B: Additional Practices

Appendix C: Autodesk Inventor Certification Exam Objectives

Course description shown for Autodesk Inventor 2017. Topics, curriculum, and/or prerequisites may change depending on software version.
Cancellation Policy

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

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- 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.
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