Course Length: 2 Days

This training course introduces the concepts and techniques of sheet metal modeling with the Autodesk Inventor software. The structure of the 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

- Understanding the Autodesk Inventor Sheet Metal interface and workflow
- Creating base faces, contour flanges, and contour rolls
- Creating secondary faces, contour flanges, and contour rolls
- Working with sheet metal parameters
- Creating flanges
- Adding hems, folds, and bends to sheet metal models
- Adding corner rounds and chamfers to sheet metal models
- Removing geometry from a sheet metal model (holes, cuts, and punch features)
- Controlling sheet metal geometry using corner seams (seams and miters)
- Generating flat patterns
- Creating lofted flanges
- Creating rip features to permit the flattening of the sheet metal geometry
- Unfolding and refolding sheet metal geometry
- Designing multi-body sheet metal models
- Documenting and annotating sheet metal drawings
- Converting solid models to sheet metal models
- Working with sheet metal styles
Prerequisites

The material covered in this training course assumes a mastery of Autodesk Inventor basics as taught in Autodesk Inventor: Introduction to Solid Modeling.

Knowledge of sheet metal processing is an asset, but not required.

Learning 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

Course description shown for Autodesk Inventor 2022. Topics, curriculum, and/or prerequisites may change depending on software version.
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

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 Flanges 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 and 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 Practice
Cancellation Policy

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

- Company reserves the right to reschedule or cancel the date, time and location of its class at any time. In the event that a Training Class is cancelled by Company, Customer is entitled to a full refund. Company shall not be responsible for any other loss incurred by Customer as a result of a cancellation or reschedule.

- 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.

- Student substitutions are acceptable with at least two (2) days prior notice to the class, provided substitution meets course prerequisites and is approved by Company’s Training Coordinator (trainingcoordinator@rand.com).

- For all Training orders, cancellation notices must be submitted to trainingcoordinator@rand.com. Company is not responsible for any error in the delivery of the email notice. In the event of any reschedule of Consulting Services and/or Dedicated/Custom Training by Customer, Company will invoice Customer for all non-cancellable travel expenses.

To request more information or to see training locations, visit www.imaginit.com/contact-us.