



## **Inventor 2012 Sheet Metal Design Course Outline**

This course introduces the concepts and techniques of sheet metal modeling with Autodesk Inventor. That is, to create sheet metal parts, edit them, generate flat patterns, and document the designs in drawings.

The topics presented in this course assume prior knowledge of 3D solid part modeling with Autodesk Inventor. Students also need to be experienced with the Windows operating system. In addition, some background with designing and drafting 3D parts (such as orthographic projections) is recommended.

### **Topics:**

#### **1. Introduction to Sheet Metal Modeling**

Sheet Metal Concepts  
Sheet Metal Terminology  
Sheet Metal Environment  
Sheet Metal Design Process

#### **2. Sheet Metal Base Features**

Applying Existing Sheet Metal Defaults  
Creating a Face as a Base Feature  
Creating Contour Flange as a Base Feature  
Creating a Contour Roll as a Base Feature

#### **3. Sheet Metal Parameters**

Sheet Metal Parameters  
Bend Relief Shapes  
Faces as Secondary Features  
Contour Flanges as Secondary Features  
Contour Rolls as Secondary Feature

#### **4. Flanges**

Creating Flanges  
Corner Relief Options

#### **5. Bending Sheet Metal.**

Hems  
Folds  
Bend Features

#### **6. Corner Rounds and Chamfers**

Creating Corner Rounds  
Creating Corner Chamfers

#### **7. Sheet Metal Cuts**

Creating Cut Features  
Creating Straight Holes  
Using Punch Tool Features  
Creating a Punch Tool  
Cuts Using Surfaces

#### **8. Corner Seams**

Creating Corner Seams and Miters  
Creating Corner Rips  
Converting Corner Seams and Bends

#### **9. Flat Pattern Environment**

Creating Flat Patterns  
Orienting Flat Patterns  
Punch Representations  
Bend Angle  
Flat Pattern Cleanup  
Exporting to DXF/DWG

#### **10. Lofted Flange and Rips**

Lofted Flanges  
Rip

#### **11. Unfold and Refold**

Unfold and Refold

#### **12. Documentation and Annotation**

Sheet Metal Drawing Terminology  
Creating Sheet Metal Drawings  
Bend & Punch Notes  
Bend Tables  
Punch Tables  
Bend Order  
Cosmetic Centerlines

#### **13. Converting Parts to Sheet Metal**

Converting Solid Model to Sheet Metal  
Non-Ruled Surfaces

**Duration:** 2 Days  
**Classroom Tuition:**  
\$595.00/student  
Group rates are available

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