

Sheetmetal using Creo Parametric 4.0

Overview

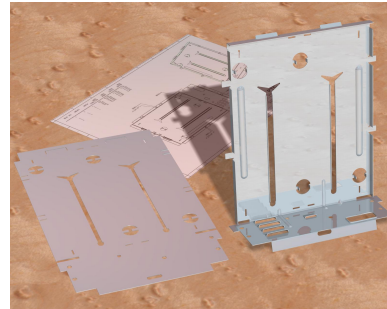
Course Code TRN-5107-T

Course Length 16 Hours

In this course, you will learn how to create sheetmetal parts in Creo Parametric. The course builds upon the basic lessons you learned in Introduction to Creo Parametric 4.0 and serves as the second stage of learning. In this course, you will learn how to design sheetmetal parts and assemblies, including sheetmetal production drawings. All the functions needed to create sheetmetal parts, drawings, and assemblies are covered. Upon completion of this course, you will be able to create sheetmetal design models, create the flat state of the model, and document both in production drawings.

At the end of each module, you will complete a set of review questions to reinforce critical topics from that module. At the end of the course, you will complete a course assessment in PTC University Proficiency intended to evaluate your understanding of the course as a whole.

This course has been developed using Creo Parametric 4.0.



Course Objectives

- Create, convert, and display the sheetmetal model
- Use methods of developed length calculation
- Use primary and secondary wall features, as well as partial walls
- Use bend relief
- Use unbend and bend back features
- Apply sheetmetal bend features
- Use flat patterns
- Create sheetmetal cuts
- Create forms
- Use notch and punch features
- Utilize the sheetmetal environment setup, sheetmetal design information tools, and sheetmetal design rules
- Detail sheetmetal designs



Prerequisites

- Introduction to Creo Parametric 4.0

Audience

- This course is intended for design engineers, mechanical designers, and industrial designers. People in related roles can also benefit from taking this course.
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Agenda

Day 1

Module	1	Introduction to the Creo Parametric Sheetmetal Design Process
Module	2	Sheetmetal Model Fundamentals
Module	3	Creating Primary Sheetmetal Wall Features
Module	4	Creating Secondary Sheetmetal Wall Features

Day 2

Module	5	Bending and Unbending Sheetmetal Models
Module	6	Sheetmetal Form Features
Module	7	Modifying Sheetmetal Models
Module	8	Sheetmetal Setup and Tools
Module	9	Detailing Sheetmetal Designs
Module	10	Design Project

Course Content

Module 1. Introduction to the Creo Parametric Sheetmetal Design Process

- i. Creo Parametric Sheetmetal Design Process

Module 2. Sheetmetal Model Fundamentals

- i. Sheetmetal Model Fundamentals
- ii. Understanding Developed Length
- iii. Creating a New Sheetmetal Part in Assembly Mode
- iv. Creating a New Sheetmetal Model in Part Mode
- v. Converting Solid Models to Sheetmetal

Module 3. Creating Primary Sheetmetal Wall Features

- i. Understanding Sheetmetal Wall Features
- ii. Creating Planar Walls
- iii. Extruded Sheetmetal Wall Features
- iv. Revolved Sheetmetal Wall Features
- v. Blend Sheetmetal Wall Features
- vi. Creating Offset Walls
- vii. Sheetmetal Wall Sketching Tools
- viii. Advanced Primary Walls

Module 4. Creating Secondary Sheetmetal Wall Features

- i. Understanding Secondary Walls
- ii. Creating Secondary Flat Walls
- iii. Using Flange Walls
- iv. Using Extruded Walls
- v. Wall Dashboard Options
- vi. Using Partial and Overextended Walls
- vii. Understanding Relief
- viii. Creating Twist Wall Features
- ix. Extending and Trimming Walls
- x. Using the Merge Feature

Module 5. Bending and Unbending Sheetmetal Models

- i. Creating Bend Features
 - ii. Adding Transition to Bends
 - iii. Bending in Multiple Planes
 - iv. Creating Planar Bends
 - v. Creating Unbend Features
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- vi. Creating Bend Back Features
- vii. Previewing and Creating Flat Patterns
- viii. Creating Flat States
- ix. Creating Split Area Features

Module 6. Sheetmetal Form Features

- i. Punch Form Features
- ii. Utilizing Punch Model Annotations
- iii. Creating Die Forms
- iv. Creating Die Forms Using Annotations
- v. Creating Sketched Forms
- vi. Flattening Forms and Unstamping Edges
- vii. Utilizing Dependency Control with Punch and Die Forms

Module 7. Modifying Sheetmetal Models

- i. Sheetmetal Cuts
- ii. Notches and Punches
- iii. Creating Multiple Bend Reliefs
- iv. Bend Line Relief Placement
- v. Creating Corner Relief
- vi. Creating Rip Features
- vii. Creating Edge Bends
- viii. Joining Walls
- ix. Patterning Walls
- x. Mirroring Walls

Module 8. Sheetmetal Setup and Tools

- i. Bend Line Adjustments
- ii. Using Bend Tables for Bend Allowances
- iii. Fixed Geometry
- iv. Info Tools and Reports
- v. Design Rules
- vi. Defaults and Parameters
- vii. Using Conversion Features

Module 9. Detailing Sheetmetal Designs

- i. Adding the Flat and Formed States
 - ii. Auto Ordinate Dimensions
 - iii. Bend Line Notes
 - iv. Bend Order Tables
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Module 10. Design Project

- i. Designing a Stapler
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