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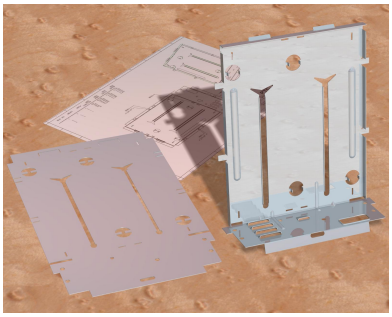
ptc university

Sheetmetal using Creo Parametric 4.0

Overview

Course Code	TRN-5107-T
Course Length	16 Hours

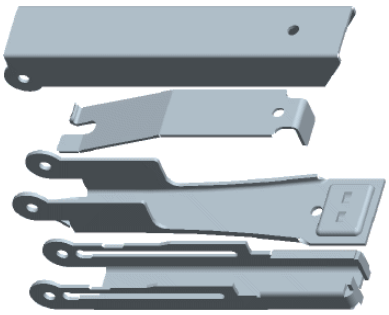


In this course, you will learn how to create sheetmetal parts in Creo Parametric. The course builds upon the basic lessons you learned in Introduction to Creo Parametric 4.0 and serves as the second stage of learning. In this course, you will learn how to design sheetmetal parts and assemblies, including 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.

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

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

Module 10. Design Project

i. Designing a Stapler