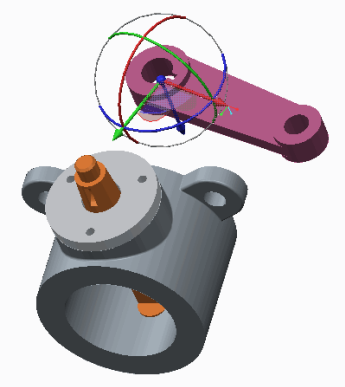
PTC university

Update to Creo Parametric from Pro/ENGINEER Wildfire 4.0

Overview

Course Code	TRN-3401-T
Course Length	2 Days

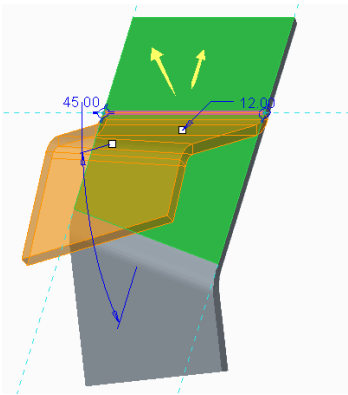


In this course, you will learn how to utilize the core functionality enhancements in Creo Parametric 1.0. First, you will become familiar with using and customizing the new ribbon interface in Creo Parametric. Next, you will study the Sketcher workflow and reference enhancements, as well as Sketcher constraint, geometry, and diagnostics enhancements. Part modeling enhancements to features such as Extrude, Trajectory Rib, Point Pattern, Corner Chamfer, Sweeps, UDFs, and Datum Curves will then be examined. You will also learn about new and enhanced Assembly capabilities such as selecting multiple components, the new relationship constraints, enhancements for dragging components, explode enhancements, simplified rep enhancements, and dynamic gear enhancements. Then you will learn how to identify and resolve part and assembly failures on-the-fly, without accessing Resolve mode. Next, you will examine the new Drawing tree and drawing sheets tabs, as well as showing annotations. Also in Drawing mode, you will learn the new Table and Balloon functionality for 2-D drawings, and review various detailing enhancements. Finally, in Sheetmetal mode you will learn to use the many updated tools such as Wall, Bend, and Relief; as well as the consolidated Flat Pattern tool and configuring Sheetmetal properties.

At the end of each module, you will complete a skills assessment. The questions are used to help reinforce your understanding of the module topics and form the basis for review of any topics, if necessary.

Course Objectives

- Utilize the Interface enhancements in Creo Parametric
- Utilize the Sketcher enhancements in Creo Parametric
- Utilize the Modeling enhancements in Creo Parametric
- Utilize the Assembly enhancements in Creo Parametric
- Utilize the Drawing enhancements in Creo Parametric
- Utilize the Sheetmetal enhancements in Creo Parametric



Prerequisites

- Introduction to Pro/ENGINEER Wildfire 4.0, or equivalent experience with Pro/ENGINEER Wildfire 4.0 or Creo Elements/Pro 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	Interface Enhancements
Module	2	Sketcher Enhancements
Module	3	Part Modeling Enhancements
Module	4	Assembly Enhancements

Day 2

Module	5	Resolving Failures
Module	6	Drawing Enhancements
Module	7	Sheetmetal Enhancements

Course Content

Module 1. Interface Enhancements

i. Understanding the Main Interface
ii. Creo Graphics Enhancements
iii. Understanding the Ribbon Interface
iv. Customizing the Ribbon Interface
v. Selection Enhancements
vi. Configuring Creo Options
vii. Insert Position Enhancements
viii. Creating Layer States
ix. Managing and Editing Appearances

Knowledge Check Questions

Module 2. Sketcher Enhancements

i. Sketcher Interface Enhancements
ii. Sketcher Workflow Enhancements
iii. Utilizing Constraints
iv. Sketching with On-the-Fly Constraints
v. Sketcher Dimension Enhancements
vi. Locking Sketcher Entities
vii. Sketching Rectangles and Parallelograms
viii. Sketching Chamfers
ix. Sketching Ellipses
x. Thickening Edges
xi. Sketching Geometry Datums
xii. Sketcher Diagnostic Tools

Knowledge Check Questions

Module 3. Part Modeling Enhancements

i. Lightweight Hole Display
ii. Intersect at Surface Round Transition
iii. Creating Curvature Continuous Rounds
iv. Feature Preview Enhancements
v. Understanding Regeneration and Auto Regeneration
vi. Editing Features
vii. Automatically Adding and Removing Material
viii. Adding Taper to Extrude Features
ix. Creating Corner Chamfers
x. Creating Trajectory Ribs
xi. Variable Section and Simple Sweep Consolidation
xii. Creating Sweeps with Open Trajectories
xiii. Creating Sweeps with Closed Trajectories

xiv. Analyzing Sweep Feature Attributes
xv. Helical Sweep Enhancements
xvi. Creating Helical Sweeps for Springs
xvii. Analyzing Helical Sweep Profile and Pitch Variations
xviii. Utilizing Variable Sections in Helical Sweeps
xix. Creating Geometry Patterns
xx. Creating Point Patterns
xxi. Direction Patterning with Multiple Direction Types
xxii. Creating Axes from Coordinate Systems
xxiii. Creating On-Surface Coordinate Systems
xxiv. UDF Enhancements
xxv. Creating UDFs Using On-Surface Coordinate Systems
xxvi. Creating a Curve From Equation
xxvii. Creating a Curve from a Cross-Section
xxviii. Creating Curves Through a Point or Vertex
xxix. Creating a Curve Through a Point Array
xxx. Creating Cosmetic Sketches
xxxi. Creating Cosmetic Threads
xxxii. Using the Draft Analysis Option

Knowledge Check Questions

Module 4. Assembly Enhancements

i. Assembly Appearance Enhancements
ii. Assembly Model Tree Enhancements
iii. Selecting Multiple Components
iv. Orienting Components
v. Creating Coincident Constraints using Geometry
vi. Creating Coincident Constraints using Datum Features
vii. Creating Distance Constraints
viii. Creating Parallel, Normal, and Angle Constraints
ix. Assembling using Automatic
x. Utilizing the Accessory Window
xi. Generic Instance Enhancements
xii. Assembly Feature Enhancements
xiii. Component Operation Enhancements
xiv. Repeating Component Placement
xv. Restructuring and Reordering Assembly Components
xvi. Component Rename Enhancements
xvii. Assembly Unit and Mass Properties Enhancements
xviii. Configuring Constraint Sets with Parameters
xix. Reviewing Assembly Changes
xx. Creating and Managing Explode States

xxi. Animating Explode States
xxii. Creating Explode Lines
xxiii. Retrieving Assembly Subsets
xxiv. Lightweight Graphics Representations
xxv. Simplified Representation Enhancements
xxvi. Defining Simplified Reps using the Component Chooser
xxvii. Envelope Enhancements
xxviii. Creating and Using an All Solid Surfaces Shrinkwrap Envelope
xxix. Creating a Default Envelope Simplified Rep
xxx. Mechanism Enhancements
xxxi. Creating Generic Gear Connections
xxxii. Creating Dynamic Gear Connections
xxxiii. Creating Belt Connections

Knowledge Check Questions

Module 5. Resolving Failures

i. Understanding and Identifying Failures
ii. Analyzing Geometry Failures
iii. Analyzing Open Section Failures
iv. Analyzing Missing Part References Failures
v. Analyzing Missing Component Failures
vi. Analyzing Missing Component Reference Failures
vii. Analyzing Invalid Assembly Constraint Failures
viii. Understanding Resolve Mode Tools
ix. Recovering Models
x. Using Creo Parametric Help

Knowledge Check Questions

Module 6. Drawing Enhancements

i. Understanding the Drawing Ribbon User Interface
ii. Exploring Drawing Ribbon Commands
iii. Detailing Ribbon and Selection Enhancements
iv. Utilizing the Drawing Tree
v. Managing Drawing Sheets
vi. Showing, Erasing, and Deleting Annotations
vii. Dimension Enhancements
viii. Detailing Enhancements
ix. Printing Enhancements
x. Detail Options Enhancements
xi. Detailing Graphics Enhancements
xii. Prefix and Postfix Enhancements
xiii. Feature-Specific Text Enhancements

xiv. Detailing Arrow Enhancements
xv. Detail and Section View Enhancements
xvi. Dimension Text Orientation Enhancements
xvii. View Scale Enhancements
xviii. BOM Enhancements
xix. Inserting Tables
xx. Editing Table Properties
xxi. Creating Tables from File
xxii. Creating BOM Balloons
xxiii. Creating Combination States and Showing Annotations
xxiv. Creating Annotation Planes and Annotation Features
xxv. Managing Annotation Display

Knowledge Check Questions

Module 7. Sheetmetal Enhancements

i. Sheetmetal Properties Enhancements
ii. Miscellaneous Sheetmetal Enhancements
iii. Extending and Trimming Walls
iv. Creating Offset Walls
v. Creating Bend Features
vi. Adding Transition to Bends
vii. Creating Planar Bends
viii. Creating Edge Bends
ix. Creating Unbend Features
x. Creating Bend Back Features
xi. Flattening Forms and Unstamping Edges
xii. Creating Split Area Features
xiii. Creating Corner Relief
xiv. Creating Rip Features
xv. Converting Solid Models to Sheetmetal
xvi. Using Conversion Features
xvii. Previewing and Creating Flat Patterns
xviii. Creating Flat States
xix. Punch Form Enhancements
xx. Utilizing Punch Model Annotations
xxi. Flatten Form Enhancements
xxii. Patterning Walls
xxiii. Mirroring Walls
xxiv. Csys Follow Surface Option
xxv. Miscellaneous Wall Enhancements

Knowledge Check Questions