

Introduction to Creo Layout 4.0

Overview

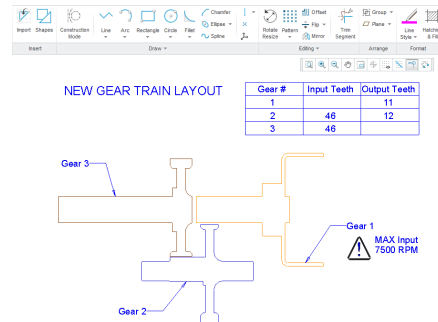
Course Code **TRN-5112-T**

Course Length **8 Hours**

In this course, you will learn about Layout, a Creo module that is used for creating unconstrained 2-D designs that can be leveraged in 3-D models. You will investigate the concepts behind Creo Layout, a typical workflow, and the user interface. You will also learn how Layout utilizes precision panels and sketching guides to intelligently sketch a variety of 2-D geometry, as well as learn how to manipulate, organize, and import layout geometry. Finally, you will learn how to leverage 2-D Layout designs in 3-D models.

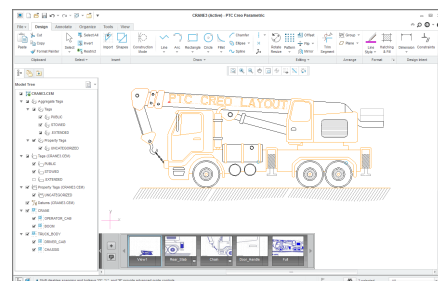
At the end of each module, you will complete a set of review questions to reinforce critical topics from that module. At the end of the course, you will complete a course assessment in PTC University Proficiency intended to evaluate your understanding of the course as a whole.

This course has been developed using Creo Layout 4.0 M020.



Course Objectives

- Understand Layout sketching methodology
- Sketch Layout geometry
- Manipulate Layout geometry
- Organize Layout geometry
- Import Layout geometry
- Annotate Layouts
- Utilize Layouts in 3-D models



Prerequisites

- Introduction to Creo Parametric 4.0 (optional)

Audience

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

Day 1

Module	1	Introduction to Layout
Module	2	Layout Sketching Methodology
Module	3	Sketching Layout Geometry
Module	4	Manipulating Layout Geometry
Module	5	Organizing Layout Geometry
Module	6	Importing Layout Geometry
Module	7	Annotating Layouts
Module	8	Utilizing Layouts in 3-D Models

Course Content

Module 1. Introduction to Layout

- i. Exploring Layout Concepts
- ii. Understanding Layout File Types and Uses
- iii. Understanding the Layout Workflow
- iv. Exploring the Layout Interface
- v. Manipulating Layout Views
- vi. Selecting Geometry
- vii. Creating a Layout

Module 2. Layout Sketching Methodology

- i. Sketching Using Cartesian and Polar Coordinates
- ii. Sketching Using Guides
- iii. Sketching Settings
- iv. Utilizing Layout Dimensions
- v. Utilizing Layout Constraints

Module 3. Sketching Layout Geometry

- i. Sketching Lines
- ii. Sketching Arcs
- iii. Sketching Rectangles and Parallelograms
- iv. Sketching Circles
- v. Sketching Fillets
- vi. Sketching Chamfers
- vii. Sketching Construction Geometry
- viii. Sketching Text
- ix. Sketching Ellipses
- x. Sketching Centerlines and Center Points
- xi. Sketching Datum Geometry

Module 4. Manipulating Layout Geometry

- i. Utilizing the Mirror and Flip Tools
 - ii. Utilizing the Trim and Merge Tools
 - iii. Patterning and Offsetting Layout Geometry
 - iv. Translating, Rotating, and Scaling Layout Geometry
 - v. Inserting 2-D Shapes
 - vi. Measuring Layout Geometry
 - vii. Utilizing 2-D Diagnostic Tools
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Module 5. Organizing Layout Geometry

- i. Exploring Geometry Color and Line Style
- ii. Grouping Layout Geometry
- iii. Creating Structures in Layout
- iv. Utilizing Geometry Tags
- v. Defining Property Tags
- vi. Understanding Sublayouts
- vii. Creating Sublayouts
- viii. Manipulating Sublayouts

Module 6. Importing Layout Geometry

- i. Importing 2-D Geometry
- ii. Importing 3-D Cross-Sections
- iii. Importing Images

Module 7. Annotating Layouts

- i. Creating Layout Symbols
- ii. Creating Layout Notes
- iii. Creating Layout Tables
- iv. Defining Layout Parameters
- v. Utilizing Hatching and Fill

Module 8. Utilizing Layouts in 3-D Models

- i. Designating Public Geometry
- ii. Assembling Layouts
- iii. Utilizing Assembled Layouts in 3-D Models
- iv. Utilizing Layout Features in 3-D Models
- v. Utilizing Update Control for 3-D Layout Features

