AutoCAD Plant 3D Complete Guide

AutoCAD® Plant 3D Complete Guide is designed to give you a solid understanding of AutoCAD Plant 3D features and capabilities. In this course you will learn from Creating Projects and P&IDs to Isometric Drawings, Creating an Orthographic Drawing and Working with the Data and Report Creator. This course includes text, images, audio, video, quizzes and practical Let Me Try exercises to accommodate all learning styles.

AutoCAD Plant 3D is used to design and document process plants and contains various predefined shapes of plant components; it comes along with AutoCAD P&ID which is used to create piping and instrumentation drawings. Plant 3D enables engineers and plant designers to efficiently produce P&IDs, and then integrate them into a 3D plant design model.

User's prerequisites

You don't need any previous experience with AutoCAD® Plant 3D to take this course.

Course Outline

Introduction to AutoCAD Plant 3D
- AutoCAD Plant 3D User Interface
- Workspaces in AutoCAD Plant 3D
- Grips
- Invoking Commands in AutoCAD Plant 3D
- Creating Backup Files
- Opening Projects
- Opening a Project Drawing
- AutoCAD Plant 3D Help

Creating Projects and P&IDs
- Project Manager
- Creating a New Drawing
- Grouping Project Files
- Copying, Renaming, and Removing Files with the Project Manager
- Batch Publish
- Creating New Projects
- Project Properties
- Designing a P&ID
- Validating the Drawing
- Moving Equipment
- Editing Lines
- Editing a P&ID Symbol
- Substituting Components
- Converting AutoCAD Components into a P&ID Symbol

Creating Structures
- Creating a Grid
- Adding Members
- Creating Stairs & Railing
- Ladders

- Creating Plates
- Creating Footings
- Setting the Representation of a Structural Member
- Editing the Structural Members
- Hiding and Displaying Components
- Exchanging Data with other Applications

Creating Equipment
- Creating Equipment
- Adding Heaters, Pumps, Heat Exchangers and other Equipment
- Modifying Equipment
- Converting Solids into Equipment
- Attaching and Detaching Objects to Equipment
- Nozzles

Adding Specifications and Catalogs
- The Spec Editor & Creating a New Spec
- Adding and Editing Parts in the Spec Editor
- Adding Notes & Long Descriptions
- Assigning Operators (Actuators) to Valves
- Working with the Catalog Editor
- Adding a New Part to a Catalog •
  Creating Branch Table Legends

Routing Pipes
- Selecting a Spec & Working with the Spec Viewer
- Setting the Route Line
- Routing a Pipe from a Line
- Routing a Pipe Using a P&ID
- Routing a Pipe from Equipment
- Working with the Compass
- Connecting Two Open Ports of Pipes

- Changing the Pipe Size while Routing
- Changing the Orientation Plane & the Elevation while Routing a Pipe
- Editing Pipe Routes with Grips
- Creating a Roll Elbow
- Creating Bends
- Routing a Pipe at a Slope
- Creating a Tee Branch & O-let Branches
- Creating a Stub-In Branch
- Adding a Reinforcing Pad to a Stub-In Branch
- Creating a Weld Connection •
  Autodesk Connection Points

Adding Valves, Fittings, and Pipe Supports
- Adding Valve and Fittings
- Adding Valves and Fittings Using a P&ID
- Placing Custom Parts
- Adding a Dummy Leg
- Adding a Hanger and Connecting it to a Structural Member
- Working with Pipe Supports
- Converting Solids to Pipe Supports
- Attaching & Detaching Objects to a Pipe Support
- Insulating a Pipe
- Working with Fittings
- Validating the 3D Model

Creating Isometric Drawings
- Creating a Quick Isometric Drawing
- Creating a Production Isometric Drawing
- Placing Iso Messages and Annotations
- Exporting a Pipe Component File
- Creating an Iso from a Pipe Component File
- Locking a Line Number

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Course Outline (cont'd)

Creating Orthographic Drawings
- Generating the First View
- Creating the Adjacent View
- Adding Annotations to the Drawing
- Adding Dimensions to the Drawing
- Locating a Component in the 3D Model
- Editing a Drawing View
- Adding Gaps to Pipes

• **Managing Data and Generating Reports**
- Data Manager and Viewing Data
- Editing Data Properties in the Data Manager
- Placing Annotations in a P&ID using the Data Manager
- Filtering the Information in the Data Table
- Exporting Data from the Data Manager
- Importing Data to the Data Manager
- Custom Report Projects
- Exporting and Importing the Project Reports
- The Report Creator
- Working with The Report Creator

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