

Course Title: AutoCAD P & ID Introduction

Course Code: APID-1

Duration: 1 Day

Courseware Description

Learn many of the essential features of AutoCAD® P&ID, including how to create P&IDs by placing equipment, connecting equipment with pipelines, and adding valves, reducers and pipe fittings. After creating the P&ID, the generation of reports and extracting data are covered. Also a part of this guide is a topic about validating your P&ID.

Objectives

This class is intended for users who have a need for generating Piping and Instrumentation Diagrams (P&ID) or Process Flow diagrams (PFD). Either draftsmen or process engineers who have the need to quickly draw a P&ID or PFD can take this class.

After completing this class, users will be able to:

- Place equipment symbols.
- Connect equipment with pipe lines.
- Add inline components like valves, reducers, and pipe fittings.
- Tag and annotate the piping and instrumentation diagram.
- Generate reports.
- Import and export data to Microsoft Excel.
- Validate the generated piping and instrumentation diagrams.

Who Should Attend

This course is designed for experienced users of AutoCAD.

Prerequisites

Students should have completed the [AutoCAD Comprehensive Introduction \(ACAD-1\)](#) course or have equivalent experience using AutoCAD.

Course Outline

Getting Started

- Launching AutoCAD P&ID
- The AutoCAD P&ID User Interface (UI)
- Your Work Screen
- Workspaces
- AutoCAD P&ID Tool Palettes
- Tool Palette Options
- Creating a Tool Palette

AutoCAD P&ID Projects

- The Project Manager
- Open a Project
- Starting a New Project
- Structuring Your Project
- Renaming and Removing Folders
- Adding Existing Drawings
- Creating New Drawings
- Removing Drawings

Creating a P&ID

- Placing Equipment
- Adding a Tag
- Adding a Tag Annotation
- Existing Numbering
- Connecting Equipment
- Setting Line Sizes
- Pipe Line Grouping / Linking
- Straight and Non Straight Lines
- Curved Lines
- Placing Inline Components - Valves
- Special Inline Components - Reducers
- Special Inline Components - Control Valve
- Instrumentation
- Manually placing General Instrumentation
- Connecting Instrumentation
- Placing Non Engineering Items
- Flow Arrow
- Spec Breaker

- Connectors
- Copying Symbols

Annotating Your Components

- General Annotation Types
- Placing Equipment Annotations
- Equipment Information Labels
- Pipeline Tag Label
- Reducer Labels
- Valve Labels
- Annotation Settings

Modifying Your P&ID

- Schematic Line Editing
- Substitute Line Type
- Schematic Line Groups Editing
- Editing Schematic Lines
- Changing Equipment and Inline Components
- Extended Valve Functionality
- Convert to Control Valve
- Edit P&ID Objects Block

Managing Your AutoCAD P&ID Project

- The Project Manager
- Adding Existing Drawings
- Project Properties
- General Settings
- Custom Properties
- Rearranging the Physical Location of Your Drawings
- Resave Project Drawings
- Sharing P&ID's with Non AutoCAD P&ID Users
- Sharing P&ID's with AutoCAD P&ID Users
- Work History

Validating your P&ID's

- Validate Project
- Ignore / Erase
- Re-Validate
- Refresh
- Validate Drawing
- Validation Settings

- Solving Errors
- Managing Your Project Data**
- The Data Manager
 - Project Data
 - Drawing Data
 - Viewing Data

- Adding and Editing Data
- Annotating with the Data Manager
- Export and Import PG&ID Data
- Filter and Sort Data
- Creating Reports

- Plotting and Publishing**
- Publish - General
 - Publish Options
- Closing and Saving**