# AutoCAD Electrical Essentials

## Overview

The AutoCAD® Electrical 2017 Essentials with IEC Standards training course covers the indispensable core topics for working with the AutoCAD® Electrical software. Students learn how to use many of the powerful electrical drawing creation tools in the AutoCAD Electrical software. Students create schematic drawings (ladder logic and point to point), panel drawings, and PLC-I/O circuits using automated commands for symbol insertion, component tagging, wire numbering, and drawing modification. In addition, students are introduced to methods of customizing AutoCAD Electrical symbols, circuits, and databases. Other topics covered include titleblock linking, reporting tools, templates, and project files.

## Prerequisites

It is recommended that delegates have a working knowledge of one or more of the following:

- Microsoft® Windows® Vista, Microsoft® Windows® XP, Microsoft® Windows® 7 or Microsoft® Windows® 8
- Proficient in using AutoCAD or have attended AutoCAD Essentials
- Electrical Terminology

## Course Outline

Introduction to AutoCAD Electrical

- What is AutoCAD Electrical?
- Drawing Files
- Electrical Components and Wires
- Design Methodologies

Project Files

- Project Manager Interface
- Accessing Project Files
- Opening a Drawing
- Creating a Drawing
- Add a Drawing to a Project File
- Managing Drawing in Projects
- Project Manager Drawing List

Schematics I – Single Wires / Components

- Referencing
- Ladders
- Insert wires
- Add rungs
- Wire setup
- Wire numbers
- Source & destination signal arrows
- Insert component
- Parent/child components

Schematics II – Multiwire and Cicuits

- Dashed link lines
- 3-Phase Ladders
- Multiple wire bus
- 3-Phase components
- 3-Phase wire numbering
- Cable markers
- Fan in/out
- Insert saved circuits
- Save circuits to icon menu
- WBlock circuits
- Copy circuit
- Move circuit
- Circuit clipboard
- Circuit builder

Editing Commands

- Edit component
- Updatin drawings
- Scoot
- Move component
- Copy component
- Align
- Delete component
- Surfer command
- Copy catalog assignment
- Copy installation / location code values

- Attribute editing commands

Panel Drawings

- Insert footprint (Icon Menu / Schematic List / Panel List)
- Edit footprint
- Assign item numbers
- Add balloons

Terminals

- Insert terminal symbol
- Multiple level terminals
- Multiple insert component command
- Insert jumpers
- Terminal strip editor
- DIN rail command

PLC Symbols

- Insert PLC (Parametric / Full Units)
- Insert individual PLC I/O Points
- PlC based tagging
- Spreadsheet PLC I/O utility

Point-to-Point Wiring Drawings

- Insert connectors
- Edit connectors
- Insert splices
- Insert multiple wires
- Bend wires

Symbol Creation

- Schematic symbols
- Naming convention
- Icon menu wizard
- AutoCAD Electrical databases
- Project database
- Catalog Database
- Footprint lookup database
- PLC Database
- Pin list database
- Terminal properties database

Titleblocks

- Update titleblocks

- Titleblock setup

Reporting tools

- Create reports
- Save to external file
- Put on drawing
- Configure report templates
- Running automatic reports
- Electrical audit

Settings and Templates

- Project properties
- Drawing properties
- Panel drawing configuration
- Template files
- Sharing symbol libraries and databases

Drawing Update Tools

- Project-Wide Update/Retag
- Project-Wide utilities
- Plot project
- Export to spreadsheet
- Update from spreadsheet
- Copy project
- Swap/update block
- Mark drawings
- Verify drawings