

---

**Course Title:** AutoCAD Electrical Introduction

**Course Code:** AELE-1

**Duration:** 2 Days

## Courseware Description

This guide provides an overview of many AutoCAD Electrical utilities designed to enable users to quickly create and manage electrical-controls production drawings. Users focus on how to build intelligent ladder diagrams and panel layouts, and how to leverage the intelligence built into AutoCAD Electrical. Hands-on exercises representing real-world design scenarios for the IEC (international) standard are included.

## Objectives

To teach users the basic commands necessary for creating professional electrical-controls drawings with AutoCAD Electrical software.

After completing this class, users will be able to:

- Navigate the AutoCAD Electrical user interface.
- Manage projects and the multiple drawing and inter-drawing relationships contained in electrical projects.
- Insert wires, add wire numbers, manage circuits, and create point-to-point wiring diagrams and drawings.
- Insert and annotate schematic symbols.
- Edit drawings project wide with commands that are specific to the electrical design environment.
- Extract information from drawings to create Bill of Material, Wiring, and other reports.
- Create and annotate panel layout drawings with lists of components that are extracted from schematic drawings and with other specific panel layout tools, such as the Terminal Strip Editor.

## Who Should Attend

New AutoCAD Electrical Users

## Prerequisites

- Completion of [ACAD-1](#) course or equivalent working knowledge of the content of this course.
  - Electrical drafting, design, or engineering principles.
  - Microsoft® Windows® 7, Windows® Vista or Microsoft® Windows® XP.
-

## Course Outline

### Day 1:

- **Basic Workflow**

Explore the Basic Circuit Workflow

- **Project Basics**

The Project Manager

Project Files

Creating New Projects

Project Drawing List

Moving Through Project Drawings

Copy Projects

- **Schematic Wiring**

Insert a Ladder & Wires

Add Point-to-Point Wiring

Add Wire Numbers

Add Source & Destination Signal Arrows

- **Schematic Components**

Insert a Relay Coil & Child Contact

Insert a Schematic Component from a Panel List

Add Connectors & Wiring

Create Terminal Jumpers & Associations

Copy, Save & Insert a Circuit

Create a Three-Phase Circuit

- **Schematic Editing**

Use Basic Editing Tools

Copy Catalog & Location Values

Swap & Update Blocks

Use Electrical Audit & Drawing Audit

Update & Retag a Project

- **Schematic Reports**

Generate Schematic Reports

- **Panel Layouts**

Create a Panel Layout from a Schematic List

Insert a DIN Rail

Edit & Insert a Terminal Strip

Annotate a Panel Layout

### Day 2:

- **Settings and Configurations**

Create New Wire Type Layers

Change the Drawing Properties

Change Project Properties

Create a Drawing Template

Edit Search Paths & the WD.ENV File

- **Custom Components**

Create a Custom Symbol

Modify the Icon Menu

Create a Panel Footprint

- **Custom Data**

Add Part Numbers & Assemblies to the Parts Catalog

Copy & Insert Relay Contacts

Edit the Terminal Properties Database

Map to a Title Block

- **PLC Modules**

Insert a Parametric PLC Module

Create a PLC Module

Add PLC Address-Based Components

Create PLC Drawings from a Spreadsheet

- **Advanced Tools**

Add Wiring Data to Footprints

Identify & Label Wires for a Cable

Use the Circuit Builder

- **Automation Tools**

Update a Drawing from a Spreadsheet

Generate Reports Automatically