



OVERVIEW OF COURSE



Autodesk AutoCAD Electrical Fundamentals - NFPA

Course Length: 3 days

AutoCAD® Electrical Fundamentals (three days) covers the indispensable core topics for working with the AutoCAD Electrical software. In this training course, 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. This course is designed using the National Fire Protection Association (NFPA) Codes and Standards.

The main topics covered in this training course include:

- Understanding project files
- Creating and editing schematic and panel drawings
- Working with PLC symbols
- Creating custom symbols
- Generating reports

Prerequisites:

A working knowledge of the AutoCAD® software and electrical terminology.



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Table of Contents

Chapter 1: Introduction to AutoCAD Electrical

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

Chapter 2: Project Files

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

Chapter 3: Schematics I - Single Wires/Components

- Referencing
- Ladders
- Insert Wires
- Edit Wires
- Add Rungs
- Wire Setup
- Wire Numbers
- Source & Destination Signal Arrows
- Insert Component
- Parent/Child Components

Chapter 4: Schematics II - Multiwire and Circuits

- Dashed Link Lines
- 3-Phase Ladders
- Multiple Wire Bus
- 3-Phase Components
- 3-Phase Wire Numbering



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- Cable Markers
- Fan In/Out
- Insert Saved Circuits
- Save Circuits to Icon Menu
- WBlock Circuits
- Copy Circuit
- Move Circuit
- Circuit Clipboard
- Circuit Builder

Chapter 5: Editing Commands

- Edit Component
- Project Task List
- Scoot
- Move Component
- Copy Component
- Align
- Delete Component
- Surfer Command
- Copy Catalog Assignment
- Copy Installation/Location Code Values
- Attribute Editing Commands

Chapter 6: Panel Drawings

- Insert Footprint (Icon Menu)
- Insert Footprint (Schematic List)
- Insert Component (Panel List)
- Edit Footprint
- Assign Item Numbers
- Add Balloons

Chapter 7: Terminals

- Insert Terminal Symbols
- Multiple Level Terminals
- Multiple Insert Component Command
- Insert Jumpers



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- Terminal Strip Editor
- DIN Rail Command

Chapter 8: PLC Symbols

- Insert PLC (Parametric)
- Insert PLC (Full Units)
- Insert Individual PLC I/O Points
- PLC Based Tagging
- Spreadsheet to PLC I/O Utility

Chapter 9: Point-to-Point Wiring Drawings

- Insert Connectors
- Edit Connectors
- Insert Splices
- Insert Multiple Wires
- Bend Wires

Chapter 10: Symbol Creation

- Schematic Symbols
- Naming Convention
- Icon Menu Wizard
- AutoCAD Electrical Databases
- Project Database
- Catalog Database
- Footprint Lookup Database
- PLC Database

Chapter 11: Titleblocks

- Update Titleblocks
- Titleblock Setup

Chapter 12: Reporting Tools

- Create Reports
- Save to External File



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- Put on Drawing
- Configure Report Templates
- Running Automatic Reports
- Electrical Audit

Chapter 13: Settings and Templates

- Project Properties
- Drawing Properties
- Panel Drawing Configuration
- Template Files
- Sharing Symbol Libraries and Databases

Chapter 14: 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

Appendix A: Skills Assessment



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Cancellation Policy

The following cancellation policy shall apply to all training engagements, Live Online, Onsite, Consulting Services and Dedicated/ Custom Training:

- Company reserves the right to reschedule or cancel the date, time and location of its class at any time. In the event that a Training Class is cancelled by Company, Customer is entitled to a full refund. Company shall not be responsible for any other loss incurred by Customer as a result of a cancellation or reschedule.
- For Customer cancellations when written notice is received at least ten (10) business days in advance of the class, the Customer is entitled to a full refund of its payment or reschedule enrollment less than ten (10) business days, Customer shall not be entitled to a refund, but shall receive a class credit to be used within three (3) months of the date of the original class.
- Student substitutions are acceptable with at least two (2) days prior notice to the class, provided substitution meets course prerequisites and is approved by Company's Training Coordinator. (training@dezinext.com)
- For all Training orders, cancellation notices must be submitted to training@dezinext.com. Company is not responsible for any error in the delivery of the email notice. In the event of any reschedule of Onsite training and/or Consulting Services and/or Dedicated/Custom Training by Customer, Company will invoice Customer for all non-cancellable travel expenses.

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