

Complete **EPLAN Electric P8** for **Industrial Automation & Panel Design**

Target Audience

This course is designed for electrical engineers, automation engineers, control panel designers, PLC engineers, maintenance engineers, engineering students, and technical professionals who want to develop practical skills in EPLAN Electric P8 for electrical schematic design, control panel engineering, project documentation, and industrial automation projects.

Course Objective

The objective of this course is to provide learners with a comprehensive understanding of EPLAN Electric P8, covering project creation, schematic development, parts and symbol management, PLC integration, panel layout design, revision management, report generation, and project documentation. The course aims to equip participants with the skills required to execute professional electrical engineering projects in accordance with industry standards and best practices.

Course Outcomes

Upon successful completion of this course, participants will be able to create and manage EPLAN projects, develop professional electrical schematics, configure and document PLC-based control systems, design control panel layouts, generate automated reports and bills of materials, manage engineering revisions, and deliver complete industrial electrical design projects using EPLAN Electric P8 with confidence and efficiency.

Course Outline

The course comprises 40 hours of theory and practical labs and is divided into 11 comprehensive chapters. Each chapter will be followed by hands-on lab exercises to reinforce learning and gauge understanding of the topics covered.

Module 1: Introduction to EPLAN Electric P8

Chapter 1.1: Overview of EPLAN

- What is EPLAN Electric P8?
- Applications in industrial automation
- EPLAN ecosystem overview
- Engineering workflow introduction

Chapter 1.2: Installation & User Interface

- Software installation and licensing
 - Workspace overview
 - Ribbon, menus, and toolbars
 - Project manager
 - Graphical editor navigation
 - Workspace customization
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Module 2: Project Creation & Management

Chapter 2.1: Creating Projects

- Creating a new project
- Project settings
- Project properties
- Page creation and management

Chapter 2.2: Project Structure

- Structure identifiers
- Functional assignments
- Location assignments
- Device organization

Chapter 2.3: Templates & Standards

- Project templates
 - Company standards
 - IEC standards overview
 - Template management
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Module 3: Plot Frames & Documentation Setup

Chapter 3.1: Plot Frames

- Understanding plot frames
- Standard plot frames
- Creating custom plot frames
- Title block configuration

Chapter 3.2: Special Texts & Forms

- Special text variables
- Automatic project information
- Form customization

Chapter 3.3: Testing Documentation Layouts

- Plot frame validation
 - Documentation consistency checks
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Module 4: Parts, Symbols & Libraries

Chapter 4.1: Symbols

- Symbol libraries
- Symbol selection
- Symbol properties
- Symbol customization

Chapter 4.2: Parts Management

- Parts database overview
- Importing parts data
- Manufacturer data integration
- Parts assignment

Chapter 4.3: Property Management

- Property arrangements
 - Custom properties
 - Data consistency
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Module 5: Electrical Schematic Design

Chapter 5.1: Schematic Fundamentals

- Electrical drawing principles
- Schematic page types
- Circuit representation

Chapter 5.2: Device Placement

- Inserting components
- Device tagging
- Connection points
- Component references

Chapter 5.3: Wiring & Connections

- Wire creation
- Connection definitions
- Wire numbering
- Potential definitions

Chapter 5.4: Cross References

- Cross-reference generation
- Device references
- Navigation between schematic pages

Chapter 5.5: Interruption Points & Core Markers

- Signal continuation
 - Interruption points
 - Cable core markers
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Module 6: PLC & Automation Design

Chapter 6.1: PLC Fundamentals

- PLC architecture overview
- PLC hardware representation

Chapter 6.2: PLC Schematic Development

- PLC I/O assignment
- Addressing methods
- PLC module integration

Chapter 6.3: Automation Applications

- Motor control circuits
 - Drive systems
 - Industrial automation examples
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Module 7: Revision Management

Chapter 7.1: Revision Concepts

- Importance of revisions
- Engineering change management

Chapter 7.2: Revision Tracking

- Manual revisions
 - Automatic revisions
 - Revision reports
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Module 8: Panel Layout Design (2D)

Chapter 8.1: General Arrangement Drawings

- Panel layout principles
- Equipment positioning

Chapter 8.2: Mounting Components

- DIN rails
- Trunking
- Mounting plates

Chapter 8.3: Panel Detailing

- Door components
- Labels and markings

- Dimensioning techniques

Chapter 8.4: Layout Optimization

- Space utilization
 - Accessibility considerations
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Module 9: Reports & Project Documentation

Chapter 9.1: Automatic Report Generation

- Report types
- Report configuration

Chapter 9.2: Bill of Materials (BOM)

- BOM creation
- Parts list generation

Chapter 9.3: Terminal & Cable Reports

- Terminal plans
- Cable reports

Chapter 9.4: Documentation Pages

- Cover page generation
 - Table of contents
 - Enclosure legends
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Module 10: Project Output & Deliverables

Chapter 10.1: Project Organization

- Page sorting
- Project structures

Chapter 10.2: PDF Generation

- Export settings

- Batch PDF creation

Chapter 10.3: Client Deliverables

- Documentation packages
 - Submission standards
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Module 11: Practical Industrial Project

Chapter 11.1: Complete Control Panel Project

- Project requirements
- Component selection

Chapter 11.2: Schematic Development

- Power circuits
- Control circuits
- PLC integration

Chapter 11.3: Panel Layout Development

- Physical arrangement
- Installation considerations

Chapter 11.4: Documentation Generation

- Reports
- BOM
- Final deliverables

Chapter 11.5: Project Review & Validation

- Error checking
- Design verification
- Final project release