

## AutoCAD Electrical Syllabus

### Introduction about AutoCAD:

- Electrical application
- Electrical symbols
- Electrical components

### AutoCAD:

- Advantages in using AutoCAD,
- Application of AutoCAD
- Introduction to Engineering drawings
- Exploring GUI
- Workspaces
- Angle of projection
- Coordinate system
- Types of co-ordinate system

### File management:

- New Page
- Q new
- Open page
- Save and Save as SLD
- Close and Exit, Quit SLD

### Draft Settings:

- Grid mode
- Snap mode
- Ortho mode
- Polar Tracking
- Object Snap
- Object Snap Tracking
- Dynamic Input
- Selection Command
- Drawing settings (Units, Limits)

### Drawing Tools:

- Line
- Circle
- Arc
- Ellipse
- Donut
- Polygon
- Rectangle

### Modify Tools:

- Erase
- Oops
- Undo
- Redo
- Explode

- Move
- Copy
- Rotate
- Mirror
- Array
- Scale
- Stretch
- Lengthen
- Trim
- Extend,
- Break
- Break at point
- Join
- Chamfer
- Fillet
- Blend curve
- Hatch
- Gradient, Boundary

**Drawing Tools:**

- Multiline
- Pline
- Spline
- Xline
- Ray
- Wipeout
- Revision cloud
- Helix

**Modify Tools:**

- Multiline style
- Multiline edit
- Pedit
- Splinedit
- Offset
- Grip Editing

**Object properties:**

- Colour
- Line type
- Line weight
- Transparency
- Match properties

**Annotations:**

- Text
- Leaders
- Tables
- Dimensions
- Font changing

- Font editing

**Layer Management:**

- Creating New Layers
- Adding /Removing layers
- Layer status
- Layer Properties
- Block
- Creating & Inserting Blocks
- WBlock

**AutoCAD Electrical:**

- Introduction about AutoCAD Electrical
- Application of AutoCAD Electrical
- AutoCAD Electrical vs AutoCAD
- Features of Electrical CAD
- Introduction to Electrical designing
- Exploring GUI
- Workspaces

**Projects Manager:**

- Introduction to Project Manager
- Creating an AutoCAD Electrical project
- Working with projects
- Copy a Project
- Delete a Project

**Drawing Single Line Diagram:**

- Creating a new drawing
- Adding a Drawing
- Add active drawing
- Removing a Drawing
- Grouping Drawing with Projects

**Symbol Libraries:**

- Schematic Components
- Inserting Schematic
- Component using Icon menu
- Inserting Schematic Component using Catalogue Browser
- Inserting Schematic Component using user-defined list
- Component types
- Inserting Multiple Components
- Connecting a Component
- Re-locating a component
- Aligning the components
- Editing the components
- Component attribute tools
- Link Component using dashed lines

**Symbol Builder:**

- Creating a New Symbol
- Symbol Audit
- Saving symbol to the library
- Changing AutoCAD symbol to ElectricalCAD Symbol

**Wires:**

- Wire types
- Creating wire layers
- Inserting wires
- Insert Multiple wires
- Trim wires
- Stretch wires
- Wire Gaps
- Modify wire
- Inter Connect Components
- Wire numbers
- Automatic wire numbers
- Wire tagging

**PLC Wiring:**

- Three Phase Wire Numbers
- PLC I/O wire numbers
- Wire Number Edit
- Markers
- Signal arrows
- Source arrow
- Destination arrow

**Ladder Diagram:**

- Ladder Tools
- Inserting New Ladder
- Modify an Existing ladder
- Renumber Ladders
- Circuit Builder
- Inserting a one-line Motor circuit
- Inserting a Dual one-Line Power Feed Circuit
- Copy Circuit
- Move Circuit
- Save circuit to icon menu.

**PLC:**

- Generate PLC layout modules
- PLC parametric selection
- PLC full units
- Module layout
- Insert PLC modules
- Edit PLC module

- Point to Point Wiring Tools
- Introduction to Connector Diagrams
- Inserting Connectors
- Editing & Modifying Connectors
- Grouping Wires using Connectors
- Splice and conversion Tools

**Panel Layout:**

- Schematic Vs Panel
- Creating a Panel layout
- Footprint
- Footprints on schematic list
- Footprint from icon menu
- Din rails
- Balloons
- Wire Annotations
- Name Plate
- Editing and Modifying Footprints
- Editing Footprint attributes
- Terminals
- Placing a Terminal
- Terminal Editor

**Audit:**

- Missing Catalogue
- Electrical Audit
- Drawing Audit

**Generating Reports:**

- Types of Schematic reports
- Generate a schematic report
- Bill of Material (BOM)
- Inserting Bill of Material (BOM) tables into drawings
- Editing BOM to Drawings

**Panel Report:**

- Types of panel reports
- Generate a panel reports
- Panels
- Bill of material for Panel
- Run Report
- Automatic report
- Automatic report generation
- Export to spreadsheet