



SOLIDWORKS
SOLIDWORKS Electrical
Training

Course Outline

SOLID  **PERTS**
by solidxperience

ENSURE YOUR SUCCESS IN 3D DESIGN WITH SOLIDWORKS

TABLE OF CONTENTS - SOLIDWORKS ELECTRICAL

SOLIDWORKS Electrical: Schematic – 3 days (21h)..... 64
SOLIDWORKS Electrical: 3D – 1 day (7h)..... 66
SOLIDWORKS Routing: Electrical – 1 day (7h)..... 67

Course Objectives : At the end of each course, students will know the capabilities of the software and will be able to use the learned features.
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SOLIDWORKS Electrical: Schematic – 3 days (21h)

1. Project Templates

- SOLIDWORKS Electrical
- Stages in the process
- Starting SOLIDWORKS Electrical
- What are projects?
- Project templates
- Project configurations
- How is a project structured?

2. Modifying Project Templates

- What are environments?
- Draw multiples wires

3. Drawing Types

- What are drawing types?
- Existing and archived projects
- Line diagram symbols
- Adding cables
- Symbols panel
- Schematic symbols
- Symbol properties

4. Symbols and Components

- What is a component?
- Description columns
- Symbol component association

5. Manufacturer's parts

- What are manufacturer's parts?
- Circuits and terminals
- Finding manufacturer parts
- Electrical assemblies

6. Wires and Equipotentials

- Equipotentials and wires
- Wire style manager
- Replacing wire
- Equipotential numbering results
- Wire numbering results
- Using nodal indicators

7. Cabling

- What is cabling?
- Cables
- Detailed cabling
- Terminal strip
- Pin to pin connections
- Copy and paste

8. Symbol Creation

- Symbols and standards
- Symbols manager
- Symbol properties
- Circuits, terminals, types
- Multiple attributes
- Splitting attribute data
- Add to library
- Copy, paste symbol

9. Macros

- What are macros?
- Creating and adding macros

see Part 2 on next page »

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SOLIDWORKS Electrical: Schematic (Part 2)

10. Cross Referencing

- What is Cross Referencing?
- Cross Referencing List
- Cross Referencing State colors
- Cross Referencing Text coding
- Cross Referencing Types
- Cross Referencing Location List

11. Managing Origin-Destination Arrows

- What are Origin-Destination Arrows?
- Origin-Destination Arrows

12. Dynamic Programmable Logic Control

- What is a PLC?
- Adding a New Scheme
- Adding a PLC Mark
- Inserting a PLC
- Editing a PLC

13. Automated Programmable Logic Control

- How are PLCs Automated?
- PLC mark part
- IO manager

14. Connectors

- Connectors
- Insert Connector
- Connector Insertion

15. 2D Cabinet Layouts

- What are Cabinet Layouts?
- Creating a 2D Layout
- Inserting Ducts and Rails
- Inserting Components
- Wire Cabling Order

16. Design Rule Checks

- What are Design Rule Checks?
- Unconnected Pins
- Equipotential Conflicts
- Max. Terminal Wires
- Duplicated Parent Symbols
- Child Symbols without Parent
- Empty Terminal Strip
- Duplicated Terminals

17. Reports

- What are Reports
- Report Manager
- Report Columns
- Column Formula
- SQL Query Column Variable
- Sort and Break

18. Simple Reports

- What are Views?

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SOLIDWORKS Electrical: 3D – 1 day (7h)

1. Assembly Creation

- What are Assemblies?
- Unarchiving a Project
- SOLIDWORKS Assembly

2. Cabinets, Ducts, & Rails

- Cabinets, Ducts, & Rails
- Insert Component
- Inserting Rails
- Inserting Ducts

3. Component Intelligence

- What is a component?
- Component Intelligence
- The Electrical Component Wizard

4. Insert Components

- Insert Components
- Align Components
- Inserting Terminals

5. Routing Wires

- Routing Wires
- Routing Path
- Route Wires

6. Routing Cables

- Routing Cables
- Route Cables
- Set Origin Destination of Cables by Location

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SOLIDWORKS Routing : Electrical – 1 day (7h)

1. Fundamentals of Routing

- What is Routing?
- Routing Setup
- General Routing Settings

2. Basic Electrical Routing

- Basic Electrical Routing
- Adding Routing Components
- Start by Drag and Drop Connector
- Auto Route
- Save to External Files

3. Routing with Clips

- Routing with Clips
- Routing Through Existing Clips
- Adding Clips while Auto Routing
- Editing a Route
- Working with Clips
- Routing Through a Clip
- Splitting a Route
- Adding a Splice
- Multiple Routes Through a Clip

4. Electrical Routing Components

- Routing Library Parts Introduction
- Electrical Routing Library Parts
- Libraries
- Routing Component Wizard
- Routing Component Attributes
- Electrical Libraries

5. Standard Cables and Reusing Routes

- Using Standard Cables
- Standard Cable Excel File
- Modifying Standard Cables
- Creating a standard Cable
- Reuse route
- Delink harness
- Routing Templates

see Part 2 on next page »

6. Electrical Data Import

- Importing Data
- Routing Library Manager
- From/To Lists
- Route Properties
- Route Guidelines
- Using Guidelines and Clips

7. Electrical Drawings

- Route Flattening and Detailing
- Annotation Flattening
- Flatten Route
- Manufacture Flattening

8. Flex Cables

- Flex Cables
- Flex Cable Routes
- Flex Cable Auto Routing
- Using Flex Cables with Clips

9. Electrical Conduits

- Electrical Conduits
- Rigid Conduit
- Orthogonal Routing with Auto Route
- Electrical Data in Conduits
- Manual Sketch Routing
- Flexible Electrical Conduit

Appendix A: Review Section

- Review of Configurations
- A Note About File References
- Design Tables
- Review of Top Down Design
- Editing Options
- Review of Design Library Task Pane
- Review of 3D Sketching

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