

SOLIDWORKS PCB Essentials

OVERVIEW

CLASSROOM LENGTH: 3 days / **INSTRUCTOR-LED ONLINE LENGTH:** 5 days

PREREQUISITES: Mechanical design experience; completion of SOLIDWORKS Essentials or similar experience.

DESCRIPTION: SOLIDWORKS PCB Essentials Training Course teaches you how to use the SOLIDWORKS PCB design software.

LESSON 1:

SOLIDWORKS PCB BASICS AND USER INTERFACE

- Introduction to Mechanical and Electrical Collaboration
- User Interface

LESSON 2:

WORKING WITH PCB DESIGN PROJECTS

- PCB Project Creation
- Adding Drawings
- Project Libraries
- Export Design

LESSON 3:

SCHEMATIC TEMPLATES

- Create Schematic Template
- Add Parameters
- Attach Images

LESSON 4:

PREFERENCES

- Overview Preferences
- Optimize Wires
- Cross-overs

LESSON 5:

CREATING SCHEMATIC SYMBOLS

- Create New Symbols
- Symbol Wizard

LESSON 6:

POPULATING SCHEMATICS

- Placing Symbols
- Library Components
- Power Ports
- Supplier Links

LESSON 7:

SCHEMATIC CONNECTIONS

- Wiring Placement Modes
- Wire Connections
- Buses
- Net Labels

LESSON 8:

USING SCHEMATIC ANNOTATIONS

- Configure Annotations
- Review Change Lists
- Execute Engineer Change Orders

LESSON 9:

COMPILING AND VERIFICATION

- Set Design Violations
- Resolving Compiling Errors

LESSON 10:

SOLIDWORKS COLLABORATION

- Create Project In SOLIDWORKS
- Collaboration between ECAD and MCAD

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LESSON 11:

CONFIGURING LAYERS AND PCB STACKS

- PCB Layout Configuration
- Layer Stacks
- Drill Pairs
- Board Thickness

LESSON 12:

DESIGNING RIGID-FLEX PCBs

- Define Rigid and Flex Board Regions
- Bend Lines and Angles
- Edit Board Geometry in SOLIDWORKS CAD

LESSON 13:

OUTLINES, CUTOUTS AND KEEPOUTS

- Modify Board Shape
- Create Cutouts
- Apply Keepouts

LESSON 14:

ORIGINS AND GRIDS

- Set Relative Origin
- Cartesian Grids
- Polar Grids

LESSON 15:

TRANSFERRING DESIGN DATA

- Link Footprints to Symbols
- Push Changes

LESSON 16:

CREATING FOOTPRINTS

- Create New Footprint
- IPC Footprint Wizard

LESSON 17:

PLACING FOOTPRINTS

- Position Footprints
- Move Components in SOLIDWORKS

LESSON 18:

DESIGN RULE CHECKS

- Create and Prioritize Rules
- Modify Clearance and Routing Rules

LESSON 19:

ROUTING

- Routing Preferences
- Interactive Routing
- Create Vias
- Multi Trace Routing
- Auto-Routing
- Copper Collaboration

LESSON 20:

POLYGON POURS

- Set Polygon Pour Parameters
- Define Pour Shape

LESSON 21:

OBJECT INSPECTOR

- Find Similar Objects
- Modify Multiple Entities

LESSON 22:

OUTPUTTING DATA

- Configure Output Documentation
- Generating Manufacturing Information