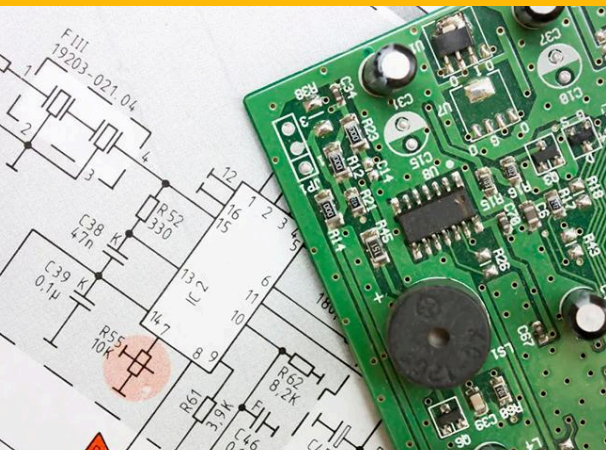


## PCB DESIGN



This program provides a comprehensive introduction to Printed Circuit Board (PCB) design concepts and processes. Participants will gain insights into schematic creation, layout principles, design tools and PCB Fabrication process. Through instructor-led presentations and demonstrations, learners will understand essential design tools, workflows, and industry standards followed in PCB manufacturing.

### Who can Participate

Operators, technicians, design engineers, and production personnel involved in electronics manufacturing, assembly, or testing who wish to gain knowledge of PCB design.

### Benefits of Participation:

Participants will learn the key steps in PCB design from concept to production, understand design tools and layout optimization, and develop skills to improve product reliability and manufacturability

### Certificate:

Participation certificate will be provided

### Mode of Training

Instructor-led Training

### Instructor

Certified IPC Designer (CID)

**Duration: Full Day**

Session No	Session Name	Description
1	<p><b>Overview and Introduction to PCB Design</b></p> <ul style="list-style-type: none"> <li>• Overview of PCB and its applications</li> <li>• Types of PCBs: Single-layer, double-layer, and multi-layer and other complex PCBs</li> <li>• Common materials used in PCB fabrication and limitations.</li> </ul>	General overview of the course

Session No	Session Name	Description
2	<b>PCB Design Tools</b> <ul style="list-style-type: none"> <li>• Introduction to popular software, key selection criteria</li> <li>• Basic interface and key functions</li> <li>• Block Diagram and Simple schematic design</li> <li>• Industry standards, guidelines</li> </ul>	Presentation
	<b>Schematic Design Basics</b> <ul style="list-style-type: none"> <li>• Component selection and placement</li> <li>• Understanding circuit diagrams</li> <li>• Net connections and DRC verification</li> </ul>	Presentation
3	<b>PCB Layout Principles</b> <ul style="list-style-type: none"> <li>• Component placement strategies</li> <li>• Routing techniques (single vs. multi-layer routing)</li> <li>• Design for manufacturing, Assembly and testing (DFM/DFA/DFT) considerations</li> </ul>	Presentation
4	<b>PCB Fabrication Process</b> <ul style="list-style-type: none"> <li>• Manufacturing steps: etching, drilling, surface finish</li> <li>• Assembly techniques (SMT, through-hole), Placement Soldering</li> <li>• Design documentation and file preparation for production (communication)</li> </ul>	Presentation
5	Q&A	Interaction with Instructor

## IMPORTANT NOTES

- GST applicable at 18% on the quoted price
- 100% payment to be made before 7 working days of the course commencement
- Minimum 10 & maximum 20 candidates/batch
- Company will share candidates name & details (as per Global Electronics Association format) 7 days in advance before commencement of the course
- Session can be organized on Saturdays
- Participation Certificate shall be provided to the candidates on Global Electronics Association India letterhead
- For In-house Training, Travelling charges to and fro and stay of trainer should be booked by members only

**For more information, please reach out to:**

**ed@electronics.org**