2 Days Workshop on PCB Designing

PCB (Printed Circuit Board) is a device which connects multiple electronic components in a single substrate It is also referred to as printed wiring board (PWB) or etched wiring board. A PCB populated with electronic components is a printed circuit assembly (PCA), also known as a printed circuit board assembly (PCBA). Printed circuit boards are used in virtually all but the simplest commercially-produced electronic devices. In the PCB Design Workshop, the participants will design the circuit schematic using Eagle PCB design software. After which they will be involved in practical sessions for fabrication and developing a real-time working PCB, using the designed circuit module from the software. With new projects of industrialization in India, embedded industry will be emerging domain and therefore, the need for PCB designers will eventually on demand. This workshop provides the right insights to develop high end PCBs by your own which help you to stand apart from crowd.

Workshop Duration: 2 days (16 hrs.)

The duration of this workshop will be two consecutive days, with eight hour session each day in a total of sixteen hours properly divided into theory and hands on sessions. At the end of this workshop, a small competition will be organized among the participating students and winners will be awarded with a Merit Certificate.

Two Day workshop Schedule:

DAY 1- 1st Session: Introduction

- PCB & Analog Circuit Designing

- Basic of Hardware & Software

- New & Upcoming Technologies

- PCB Designing Software (PSpice & Eagle)

DAY 1- 2nd Session: Different Circuits on PCB Designing Software

- DC/AC Analysis of circuits. RC, RL, RLC Circuits & Resonance

- Transformer Designing

- Diode & Application Circuits

- Clipper and Clamper Circuit

- BJT/JFET Amplifier Designing

- Operational Amplifiers & Application Circuits

- Flip Flops Designing

- Analog Filter Designing

- Voltage Regulators & Power Supply Circuit Design Oscillator Circuit.

DAY 2- 1st Session: Training of Soldering & De-Soldering Technique

- Soldering Techniques

- Different Methods of Soldering

- How to solder different components

DAY 2- 2nd Session: PCB Designing

- Making circuit on PCB Design Software

- Deploying basic circuits from paper to schematic window

- Making Board Layout

- Checking for errors and finalizing layout

- Etching process

- Drilling and Soldering methods of PCB

DAY 2- 3rd Session: Testing & Trouble Shooting

- Testing and troubleshooting once your PCB is ready.

- Various trouble shooting techniques.

Note: These are just the major aspects that we will be discussing, each point will be elaborated in detail with demonstrations of the tools and techniques.

Student Takeaways

- PCB Design Toolkit (Useful Software/Tools, Ebooks, Videos, Tutorials Presentations).

- Comprehensive course material will be provided to participants.

Prerequisite for Workshop

- Passion to learn new creative things.

- Knowledge of basic chips and micro controllers.

- Having basic knowledge of Computers.

- Basics of programming.

- PC/laptop must have at least 2GB RAM.

- Windows is preferable

- In case of MacBook or Linux, You need virtual window or .exe installers.

- Laptop/PC must have Bluetooth and its drivers.

Who Could Attend?

- College students seeking future in PCB Designing.

- Educate Faculty & Staff in PCB Designing.

- Electronics, Instrumentation & Communications Students.

- Students from any branch can attend the workshop.

Benefits of Workshop

- Detailed knowledge about PCB Designing Softwares.

- Students can design any Circuit or development Board.

- How to do debugging in hardware projects.

- Programming/ Analytical skills.

Course Material & CD

- Software tool kit CD having (Study E-Book, Videos, Softwares)