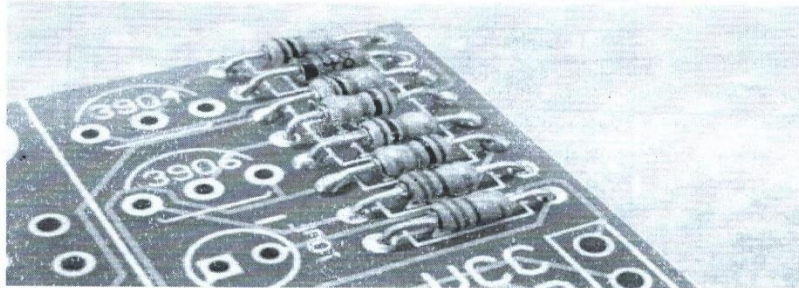


Report on PCB Design & Fabrication

Date: 3/01/2020-7/01/2020

About PCB Design

A printed circuit board, or PCB, is used to mechanically support and electrically connect electronic components using conductive pathways, tracks or signal traces etched from copper sheets laminated onto a non-conductive substrate. Today printed circuit boards are used in virtually all but the simplest commercially produced electronic devices, and allow fully automated assembly processes that were not possible or practical in earlier era tag type circuit assembly processes. Consumers are driving industry growth with a desire for cool products. Great technology is no longer enough to differentiate a product. It must be squeezed into a "cool" package in order to sell. This has an effect on everything inside the box -- including the PCB, the chips and what's packaged on the chips.



Workshop on PCB Designing & Fabrication:

Students end up spending upto 50 % of their project development time and money due to improper electronic component selection using trial & error method for their minor & major projects. This Workshop is dedicated in training the students on the design and manufacturing of a Printed Circuit Board. This workshop is an invaluable resource for those who are learning PCB design. Designing a PCB is not something you will do in a couple of hours. It is a highly technical learned skill that will take years to master. The Workshop will provide the basics of PCB design as well as more advanced topics.

This is a two day program which focuses on advanced topic of PCB design along Fabrication process. In day one each participant will design PCB layout using KI-CA D software, In day two they will involve in etching process on a laminated copper sheet provided to them, they will also under go for drilling process using a Hand driller and finally assembling and soldering the electrical components onto board.

Workshop Schedule:


Day/Session	Topics Covered
Day 1	Introduction to PCB
	Types of PCB s
	Advantages o f PCB
	Methods of making PCB
	Toner Transfer Method
	Introduction to Etching process
	PCB Designing - Career prospects
	Introduction to KICAD
	Steps in KICAD-Eeschema , schematic design
	Annotation, Electric Rule Check
	Net list generation
	BOM Generation
	Cvpcb-changing components to module
	Day 2
Selecting an d assigning footprints	
PCB new-PCB Editing and Routing	
Designing the tracks	
PCB Edges	
3D View of Gerber File Generation	
Component Creation	
Adding components to library	
Footprint Creation	
Day 3	Etching Process
	Drilling process and Drilling Techniques
	Soldering Techniques
Day 4	Soldering process
	Other manufacturing processes & Industrial Manufacturing videos
Day 5	Circuit explanation
	Testing the board
	Review and Q&A session

Workshop outcomes:


Hands on Designing and Manufacturing of PCB boards which covers all the basics of electronics and the working principles. This workshop is useful in the future while doing their academic projects or any scientific research in the college.

Take Away by Participants:

- ✓ Learn & Interact with renowned Industry Experts.
- ✓ Receive an unparalleled education on the art of PCB designing with personal one-on-one attention.
- ✓ Covers all the basics of PCBs.
- ✓ Softcopy developed by well-established Industry experts (through-mail).
- ✓ Hands on Experience of Latest PCB Techniques & Tools. All the necessary software & Hardware would be provided for the workshop purpose.
- ✓ **Take Away PCB board done by them.**
- ✓ **Certificate of participation**


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