Srishyla Educational Trust (R), Bheemasamudra
GM INSTITUTE OF TECHNOLOGY, DAVANGERE
Approved by AICTE | Affiliated by V T U Belagavi | Recognized by Govt. of Karnataka

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Report On

Institute IQAC

"3 days' Workshop on "PCB Design and Fabrication"

08/08/2023 to 10/08/2023

Coordinators
Mr. Santhosh B G /
Mrs. Revathi S N
Assistant Professor

Verified By
Dr. Praveen J
Head of the Department
Head of the Department
Dept. of Electronics & Comm. Engg.
GM Institute of Technology
DAVANGERE-577 006

Checked by
Dr. Sunil Kumar B S
Dean Academics
DEAN ACADEMICS
G.M. Institute Of Technology
DAVANGERE-577006.

Approved by
Dr. Sanjay Pande M B
Principal
PRINCIPAL
GM Institute of Technology
Davangere - 577 006.

Checked by
Dr. Praveen J
IQAC-Director
Head of the Department
Dept. of Electronics & Comm. Engg.
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Department of Electronics and Communication Engineering

Invitation

We cordially invite you for the

3-days Student Development program

on

"PCB Design and Fabrication"

08th to 10th August 2023

Convener:
Dr. Praveen J
IQAC-Director
Professor& Head
Dept. of ECE, GMIT

President:
Dr. Sanjay Pande M B
Principal
GMIT, Davangere

Coordinators

Mr. Santhosh B G
Assistant Professor
Dept. of ECE, GMIT

Mrs. Revathi S N
Assistant Professor
Dept. of ECE, GMIT

Organized By:

Department of Electronics and Communication Engineering

in association with Institute IQAC Cell.

Venue: MBA 416A.

Date: 08th August 2023 Time: 9:30 AM

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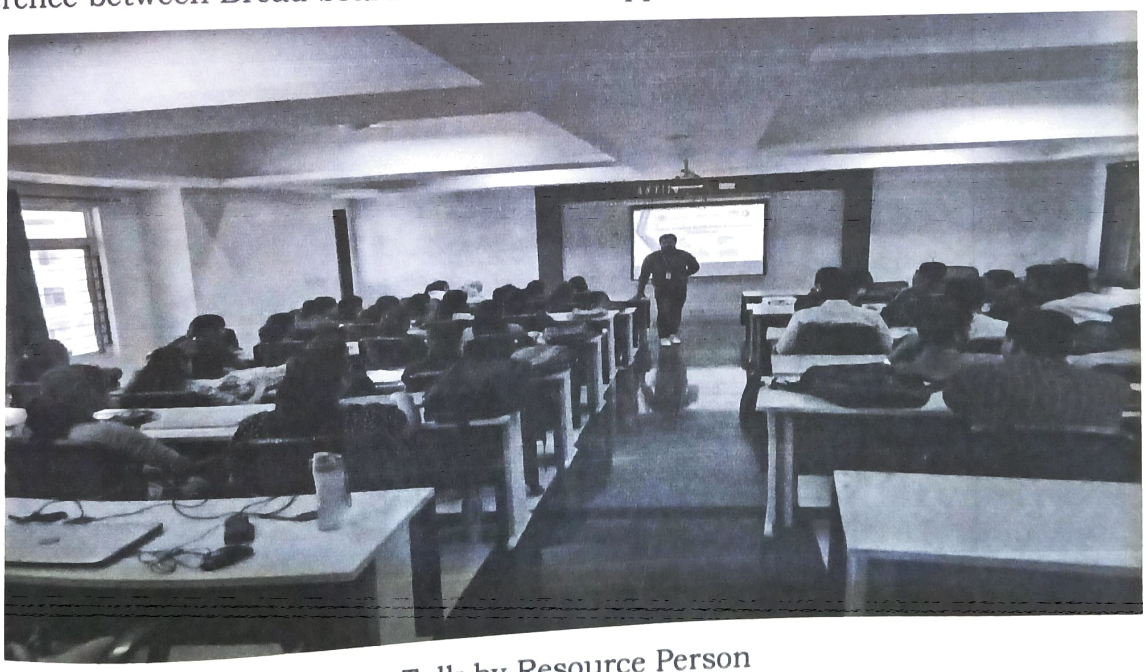
Report on
3 day Workshop of "PCB Design and Fabrication"

PCB Design and fabrication, means building an actual circuit to a theoretical design to verify that it works.. It is a very exciting and interesting way to learn, apply and understand engineering principles.

PCB Design and Fabrication Workshop is 100% hands on workshop, where students/Participants can design & develop their own PCB board and can perform product development. Participants will learn PCB design using Design spark PCB software. Then they will print the design on copper clad using toner transfer method followed with few scientific steps. Once the PCB is ready, we need to mount all the required electronic components on it with soldering.

To enhance the technical skills in students Electronics and Communication Department of GMIT organized 3 days workshop on PCB Design and Fabrication in collaboration with Institute IQAC at GM Institute of Technology Davangere from 08/08/2023 to 10/08/2023.

During Day 1 the first session on 08th August from 9.30 am to 12.00 pm resource person **Mr. Santhosh B G** explained about the basics of PCB, Working principle of PCB, difference between Bread board and PCB and Applications of PCB.



Talk by Resource Person

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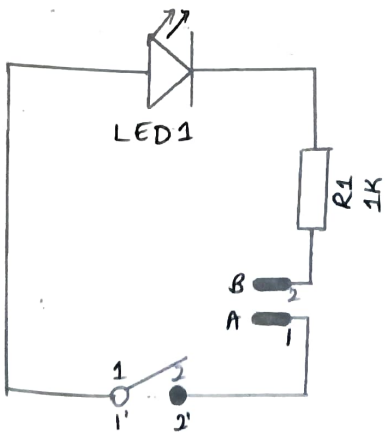
During the second session on 8th August from 1.00 pm to 4:30 pm resource person Mrs. Revathi S N explained about Designspark software installation and how to draw schematics and layout for PCB using Designspark software tool.

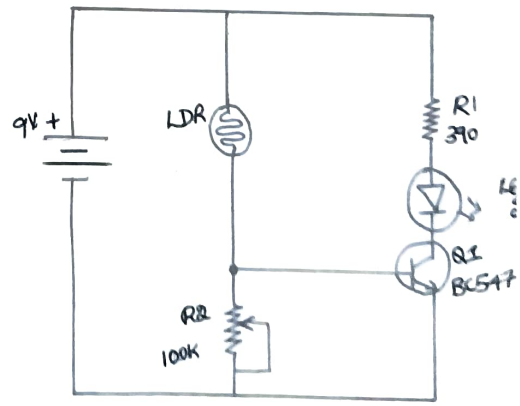
Design Spark Software Installation

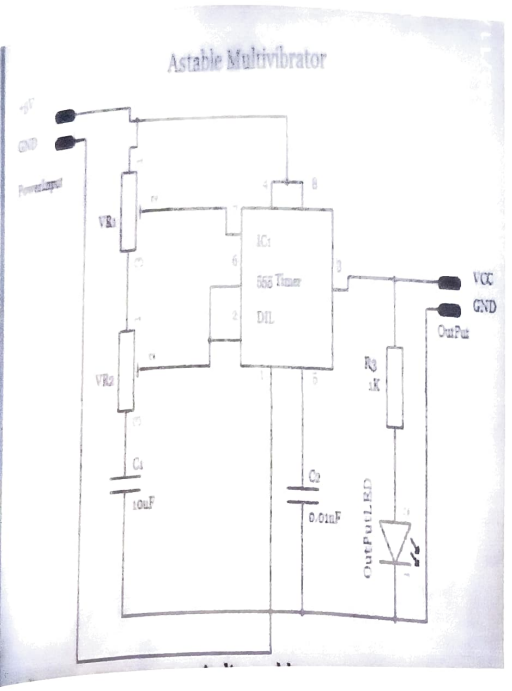
Day 2 on 9th August 2023 1st session from 9:30 am to 1.00 pm the resource persons **Mr. Santhosh B G & Mrs. Revathi S N** taught how to design different schematics circuits by using design spark software tool. In 2nd session from 2.00 pm to 4:30 pm the session was completely hand on session, simulation using Design spark software. 4 student Coordinators helped participants to develop their Schematics of different circuits.

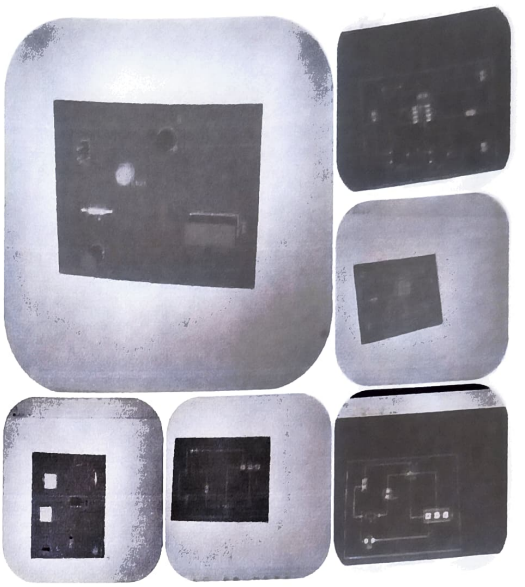
① LED [light-emitting diode]

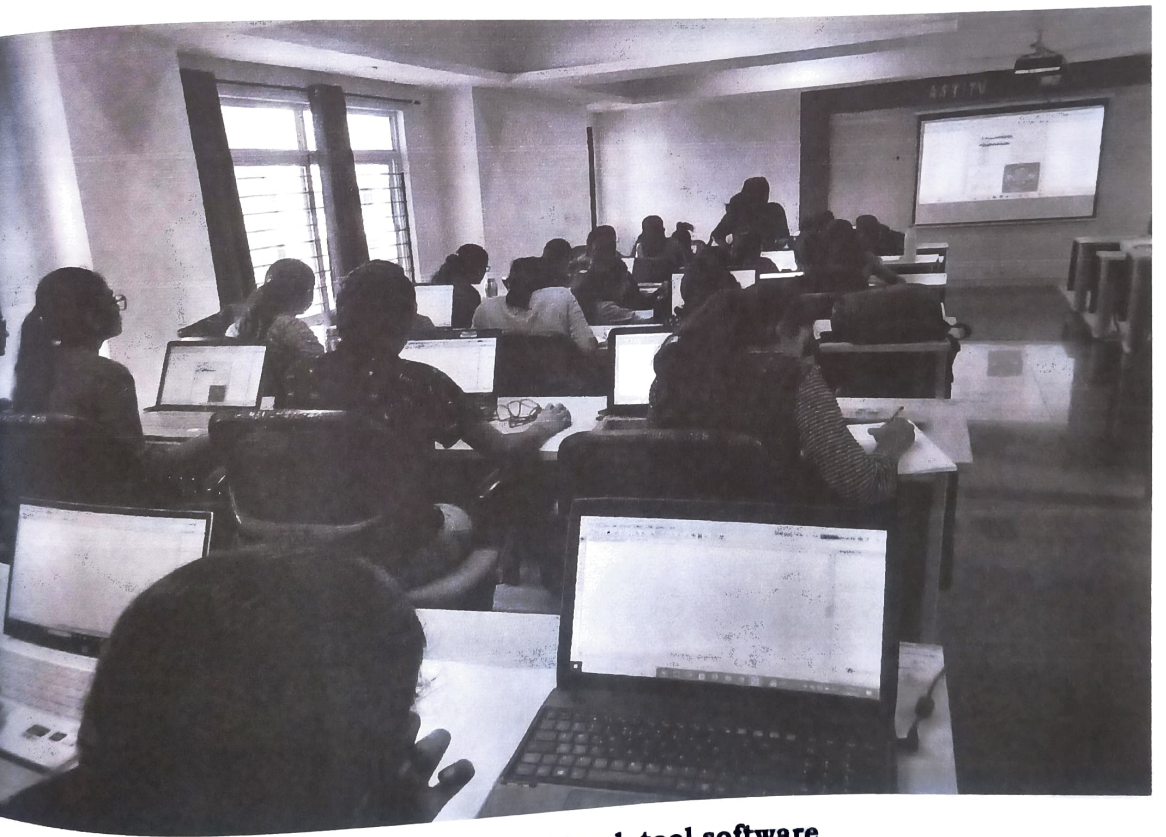


② LDR [light dependent Resistor]









Circuit Design in Spark tool software

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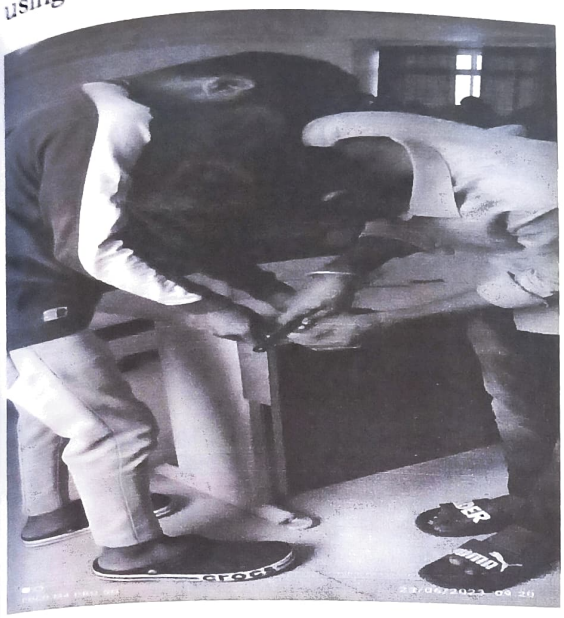
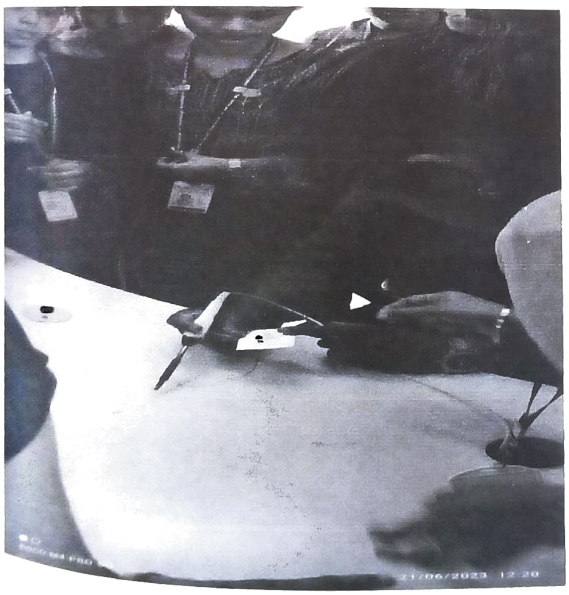
Third day session was conducted on 10/08/2023. The morning session from 9.30 am to 1.00 pm. Students involved in workshop with great enthusiasm and developed their own PCB Fabrication by including following steps such as Clad cutting, etching by using Ferric Chloride and salt in hot water.

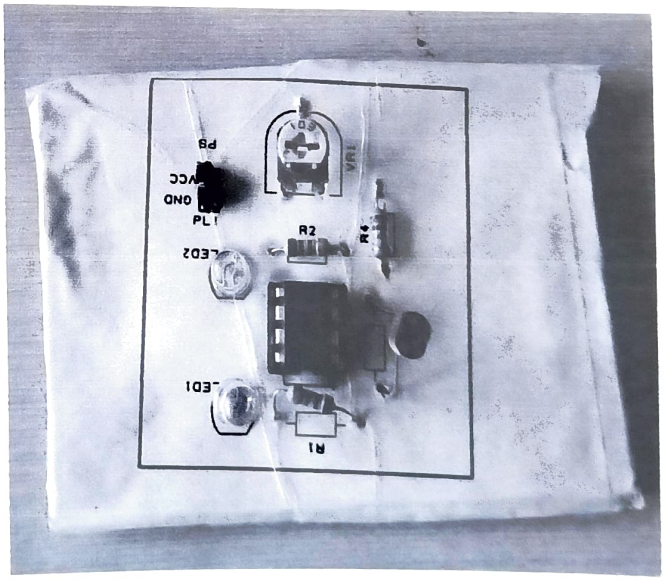


Copper clad cutting

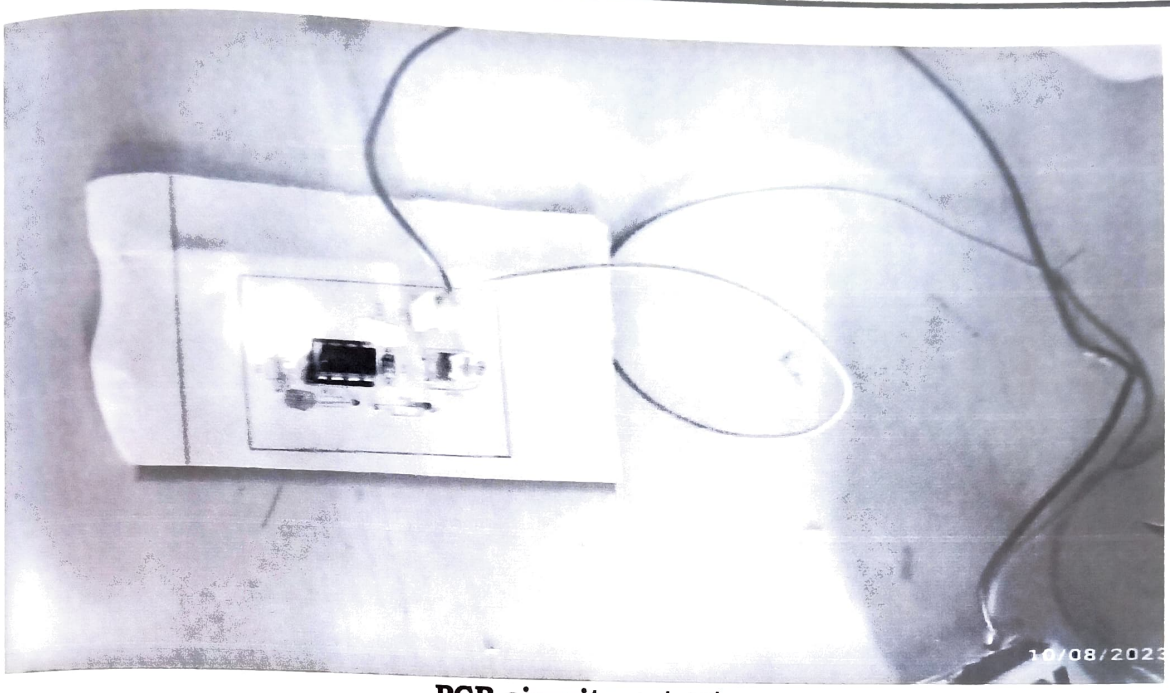
copper plate etching process

Same day the afternoon from 2.00pm to 5.00pm they mounted required electronic components on PCB and the same were tested.





Mounting of electronic components on PCB with soldering



PCB circuits output

The workshop was concluded with a valedictory function. During the function **Dr. Sanjay Pande M B**, Principal addressed the gathering. And **Dr. Praveen J** Professor and Head ECE Department, GMIT., addressed the gathering. Students improved their technical skills and enjoyed by making their own PCB. Participants gave good feedback on workshop few snapshots taken during the workshop is attached here.

Valedictory of 3 day workshop on "**PCB Design and Fabrication**"

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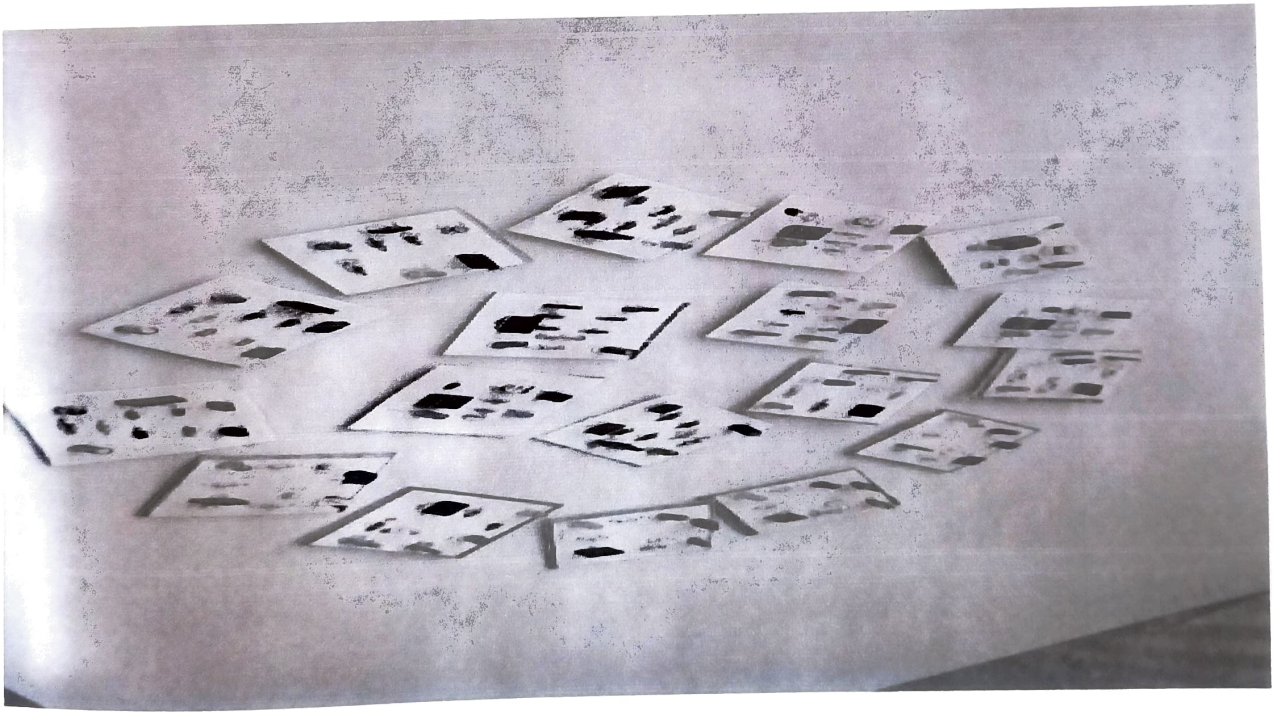
Glimpses of 3day Workshop on "PCB Design and Fabrication"



Impact Analysis of 3-Days hands-on workshop on

"PCB Design and Fabrication"

Conducted for 2nd Semester G Section Students

On 08th to 10th August 2023

Feedback of workshop on PO's & PSO's

Total Number of Students: 62

Program Outcome		Strongly Agree	Moderately Agree	Slightly Agree
PO1	Engineering knowledge	32	28	2
PO3	Design/development of solutions	32	29	1
PO5	Modern tool usage	33	27	2
PO9	Individual and team work	32	26	4
PO10	Communication	33	26	3
PO12	Life-long learning	35	25	2
PSO1	Are you able to design, analyze and develop analog/digital systems using the development process and software tools used in this SDP for the development of Circuit boards.	30	29	3
PSO2	Are you able to implement modules of embedded systems for various applications after this SDP.	36	24	2