JAYAWANT SHIKSHAN PRASARAK MANDAL's
Bhivarabai Sawant Institute of Technology & Research
(Approved by AICTE New Delhi, DTE Mumbai & Affliated to Savitribai Phule Pune University)
Accredited with B++ Grade by NAAC
Gat No. 719/1 & 2, Wagholi, Pune-Nagar Road, Pune-412207
Ph : 020-067335108, 65217050, 67335100
Telefax : 020-67335100
Website : www.jspm.edu.in / www.bsiotr.org
EN 6311 / CEGP-013100

Prof. Dr. T. J. Sawant
B.E. (Elec.) PGDM, Ph.D
Founder Secretary

Dr. T.K. Nagaraj
ME. (Civil Engg), Ph.D (Civil Engg)
LMISTE, LMIGS, LMIRC
LMISRMTT, LMIE
Principal

REPORT ON
"Two Days workshop on PCB Design"
(Under the Electronics & Telecommunication Students Association)

at
Department of Electronics and Telecommunication Engineering
Bhivarabai Sawant Institute of Technology & Research Wagholi, Pune

Name of The Programme	**"Two Day workshop on PCB Design"** **(Under the Electronics & Telecommunication Students Association)**
Date	13th March 2023 to 14th March 2023
Mode	Offline
Organizer	Department of Electronics and Telecommunication Engineering of Bhivarabai Sawant Institute of Technology & Research Wagholi, Pune
Programme Convenor	Dr. Y. S. Angal, HOD (E&TC)
Programme Co-Ordinator	Asst. Prof. S. V. Malge (E&TC)
Participants	76 Participants (SE E&TC)

Introduction:

In today's engineering world, it is very important to develop practical skills along with theoretical knowledge. The workshop was aimed to provide knowledge about Complete PCB Designing using simulation tool to test circuit and also its Fabrication design software named as Proteus & to make physical PCB so that any student can make project on his own. The Workshop provide opportunities to students should be equipped with additional knowledge to face the competitive world, instead of always restricted to curricular knowledge. The workshop was attended by 76 participants from Second Year Electronics & Telecommunication Engineering Students.

The objective of this workshop was to give hands on training to the Second year Engineering students on designing and fabricating the printed circuit boards. The workshop was free and compulsory to all students.

Workshop Objective:

Sr. No.	Workshop Objective
1	Understand the need for PCB Design and steps involved in PCB Design and Fabrication process.
2	Familiarize Schematic and layout design flow using Open-source Tools.

The workshop was conducted for two days. On first day, In the introduction explained the basic knowledge of Printed circuit boards and how they differ from general circuit boards and breadboards. All the students were explained about the significance of PCB design and the steps in the design process. Students learned Proteus Open-Source software for schematic and layout design of circuit with an example. Simultaneously students also handled the software. also demonstrated some examples by simulating different circuits. Students were instructed to simulate some other logical circuits along with hands on session on the same projects.

On second day, all the students grouped in batch of four students have exposed to hands on practice on various steps in the circuit preparation and learned Copper clad cutting, clean copper clad, apply photo resist, expose to Ultraviolet light through Negative Image, Post Baking of copper clad, Etching Process, Drilling Process, PCB Soldering procedure & dos and don'ts of making PCB & Test PCB Board & mount components and soldering process. all the students were taken to project laboratory for simulating the PCB design process. An interactive session was also organized to bridge the gap of knowledge between students and faculties. Different queries of students regarding printed circuit boards were solved and briefly explained.

Tools Used for PCB workshop:

Sr. No.	Tools	Description
1	Software	Proteus (Open-Source)
2	Hardware	PCB Cutter
3		PCB Coater Cum Dryer
4		UV Exposer
5		PCB Etcher
6		PCB Driller

GLIMPSES OF THE WORKSHOP:

Copper clad cutting

Cleaning copper clad

Applying photo resist

Drying Copper Clad

Exposing to UV light through Negative Image
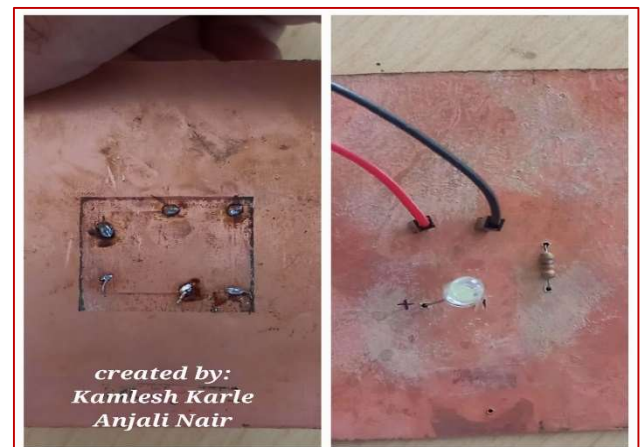

Post Baking of copper clad

Etching Process

Drilling Process

Mounting components and soldering process

Final Printed Circuit Board

Student Attendance:

Department of Electronics and Telecommunication Engineering
"Printed Circuit Board Workshop"
Under Electronics and Telecommunication Students Association
Class:SE
Date: 13 & 14 March 2023

Roll No	Student Name	Sign
2201	BAGWAN MUBEEN SAMEER	
2202	GAIKWAD PRASAD SANTOSH	
2203	RODE ABHIRAJ PRAVIN	
2204	ADHAV ARYA SHIVAJI	
2205	AJAY SUNIL KASABE	
2206	ANDHARE PRIYA VINAYAK	
2207	ANKUSHE MAHESH RAJENDRA	
2208	AUTI SOHAM RAMDAS	
2209	BANDE RUSHIKESH LAXMAN	
2210	BHOSALE SHAMBHURANJE SANTOSH	
2211	CHAVAN PIYUSH KAUTIK	
2212	CHAVAN RAVIRAJ ANANDRAO	
2213	CHAVARE ATHARV UMESH	
2214	CHOURE PRANITA BHAUSAHEB	
2215	CIRVI UMESH MOHANLAL	
2216	DHALPE ATHARV VIJAYKUMAR	
2217	DHULGANDE KIRAN SURYAKANT	
2218	GAVANDI UDDHAV SANJAY	

2219	GHULE SANKET ARUN	
2220	GUND SANDESH SANTOSH	
2221	HOLKAR MANSI MUKUND	
2222	JADHAV SITARAM SUBHASH	
2223	JADHAWAR ASHUTOSH RAMESH	
2224	KADAM ADITYA MANOHAR	
2225	KADAM KUNAL ASHISH	
2226	KAKADE PRANITEE ARJUN	
227	KARLE KAMLESH RAJENDRA	
2228	KATE CHANDRASHEKHAR BHAUSAHEB	
2229	KUMBHAR AKSHAY VIJAY	
2230	MORE ANURAG CHAURANG	
2231	MOURYA TUSHAR ANIL	
2232	NAIR ANJALI RAJAN	
2233	NARWADE RITESH SANTOSH	
2234	NIKAM VISHAKHA SUDHAKAR	
2235	NISHANT S PAWAR	
2236	PATIL RUSHIKESH VISHNU	
2237	PATIL SIDDHANT SOMNATH	
2238	PATIL VAIBHAV RAJENDRA	
2239	PESHAVE MADHURA SANJAY	
2240	PHAD GAYTRI HARIBHAU	
2241	PRANITA JALINDAR GADHAVE	
2242	RAMBHAD RUSHITA YOGESH	
2243	RASAL KARTIKI SACHIN	
2244	RASAL UDAY SHARAD	

2245	RODE ASHWINI TANAJI	
2246	ROKADE SAKSHI ANIL	
2247	ROLE ROHIT BHIMRAO	
2248	SALEGAONKAR ANAND GOPALRAO	
2249	SALUNKE GANESH SHIVAJI	
2250	SARULE ASHISH DEVICHAND	
2251	SAYYED MUSKAN RASULSAB	
2252	SHARDUL NIKITA NITIN	
2253	SHETE RUTUJA RATAN	
2254	SHINDE SUSHANT RAJENDRA	
2255	SHITOLE SHIVANI MINANATH	
2256	SONAWANE SHALAKA SUNIL	
2257	SOPANE DNYANESHWARI SAHEBRAO	
2258	TALE PRATIK SUBHASHRAO	
2259	THAKARE SANDESH SHANKAR	
2260	UBALE KUBER ANIL	
2261	WALKIKAR SANIYA DINESH	
2262	YENGE ANTESHWAR NAMDEV	
2263	KULKARNI PARJANYA PRAVIN	
2264	PAWAR SAMRUDDHI PRAKASH	
2265	ADHAU ABHISHEK VINOD	
2266	SINGH SUNDARAM BRAJESH	
2267	THAKUR ASHUTOSH RAM	
2268	WAHUL DIPAK GANESH	
2269	PATHARKAR YOGESH PRAKASH	
2270	ABHIJEET TATYASAHEB CHAUDHARI	

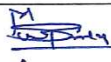|		
2271	AVINASH BHARAT GHALME	
2272	PRATEEK GAJENDRA HAJARE	
2273	SHRADHA BHASKAR DIGHE	
2274	DIVYA ZUMBAR KAWALE	
2275	ARCHANA SHIVAJI SONAWANE	
2276	PARIGHA SANJAY PATIL	
2277	RUDRESH RODE	

Program Co-ordinator

H.O.D.
Electronics & Telecommunication Dep
Bhivarabai Sawant Institute of
Technology & Research
Wagholi, Pune- 412 207

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Workshop Outcome:

By attending the workshop, the students can be able to perform different projects under "Project based Learning", Mini as well as Major projects, as part of the curriculum. Further, the students will gain knowledge on hardware design related issues.

Sr. No.	Workshop Outcome	PO	PSO
1	Understand the steps involved in schematic, layout, fabrication and assembly process of PCB design	PO1, PO2, PO3, PO4, PO10	PSO1, PSO2
2	Design (schematic and layout) and fabricate PCB for simple circuits.	PO1, PO2, PO3, PO4, PO5, PO10	PSO3

Programme Co-Ordinator	Asst. Prof. S. V. Malge (E&TC) BSIOTR	
Programme Convenor	Dr. Y. S. Angal, HOD (E&TC), BSIOTR	
Principal	Dr. T. K. Nagaraj, Principal, BSIOTR	