SANDIP FOUNDATION

SIEM | Sandip Institute of Engineering & Management (SIEM) College Code - 5331

Department of Electronics & Telecommunication

Event Title: PCB Designing workshop

Event Date: 12th Feb 2024

Event Conduction Duration: 2hrs (11.00 AM- 1.00 PM)

Event Venue: PCB lab,SIEM,Sandip Foundation,Nashik

Participants: SE students of E&TC Department

Name of Resource Person : Mr.Shekhar Shinde, MET IOE

Name of Faculty coordinator: Prof. Yogesh Risodkar, Prof.Bharat Deore

Objectives:

To introduce second-year engineering students to the fundamentals of PCB design and equip them with the basic knowledge and skills necessary to start designing their own simple PCBs for various electronic projects.

Outcome:

1. **Introduction to PCB Design:** Provide a basic understanding of what PCBs are and their significance in electronic circuits.
2. **PCB Design Software Familiarization:** Introduce students to common PCB design software tools such as Eagle, KiCad, or EasyEDA. Teach them basic navigation, component placement, and routing.
3. **Component Selection:** Teach students how to select appropriate components based on specifications, availability, and cost considerations.
4. **Schematic Design:** Guide students through the process of creating schematic diagrams that accurately represent the electrical connections between components.
5. **PCB Layout:** Introduce students to the process of laying out components on a PCB, emphasizing considerations for signal integrity, power distribution, and thermal management.

6. **Design Constraints:** Explain design constraints such as board size, layer count, trace width, and clearance requirements, and teach students how to set up basic design rules.
7. **Basic Signal Integrity Concepts:** Introduce students to basic concepts related to signal integrity, such as trace impedance and reflections, and how to design PCBs to minimize signal integrity issues.
8. **Manufacturing and Assembly Basics:** Provide an overview of the PCB manufacturing process, including fabrication, assembly, and testing, and discuss how design decisions can impact these processes.
9. **Prototyping and Testing:** Discuss methods for prototyping PCB designs using breadboards or prototyping boards, and introduce basic testing techniques to ensure functionality and reliability.
10. **Hands-on Design Projects:** Provide students with opportunities to apply the concepts learned in the workshop through hands-on design projects, such as designing a simple PCB for a specific application.

Photos:

GPS Map Camera
Mahiravni, Maharashtra, India
XM87+V25, Trambakeshwar Rd, Mahiravni, Maharashtra 422213, India
Lat 19.967149°
Long 73.662489°
12/02/24 12:05 PM GMT +05:30
Google

Prof. Yogesh R.Risodkar

Event Coordinator **H.O.D E&TC**