

## Department of CSE-IOT (Internet of Things)

**Event:-BEEE Workshop**

**Date:-05-11-2025**

### Organized by:

Department of Electrical and Electronics Engineering

Ramachandra College of Engineering Autonomous

### Introduction

The **Basic Electrical and Electronics Engineering (BEEE) Workshop** was organized to provide students with a fundamental understanding of electrical and electronic systems through hands-on practical sessions. The primary goal of this workshop was to bridge the gap between theoretical knowledge gained in the classroom and its practical applications in real-world situations.

Electrical and electronic engineering form the backbone of all modern technology, from household electrical systems to complex embedded systems used in industries. The BEEE Workshop served as an introductory platform where students learned how electricity and electronics operate in daily life, and how engineers design, test, and maintain such systems.

The workshop emphasized both **practical exposure and safety practices** in handling electrical equipment, performing basic wiring, using measuring instruments, and understanding the operation of simple electrical and electronic components.

### Objectives of the Workshop

The main objectives of the BEEE Workshop were:

1. To familiarize students with electrical and electronic tools, devices, and instruments.
2. To help students understand the basic laws of electricity such as Ohm's law and Kirchhoff's laws.
3. To provide hands-on experience in performing simple electrical wiring connections like one-way, two-way, and staircase wiring.
4. To measure electrical parameters such as current, voltage, power, and resistance using appropriate instruments.
5. To introduce students to basic electronic components like resistors, capacitors, diodes, transistors, and LEDs.
6. To demonstrate safety procedures and precautions while working with electrical systems.
7. To develop a foundational understanding of circuits used in household and industrial applications.

### Workshop Activities

The **one-day BEEE Workshop** was conducted in the Electrical Machines Laboratory. The event began with an inaugural session where the Head of the Department addressed the students, highlighting the importance of understanding electrical and electronic fundamentals in all engineering disciplines.

After the introduction, faculty members demonstrated various **electrical tools and measuring instruments**, explaining their functions and usage. Students were shown how to safely handle tools such as pliers, wire strippers, screwdrivers, testers, and multimeters.

Later, students participated in **basic wiring exercises**, including one-way and two-way control of lamps. They learned to connect circuits on switchboards using wires, switches, and bulbs, and tested them with supervision. Through this activity, students understood how current flows in a circuit and how switches control electrical appliances.

The electronics section introduced students to **basic electronic components**, such as resistors, capacitors, diodes, transistors, and LEDs. Each component was identified and tested using a multimeter. Students also learned about **resistor color coding** and **polarity of diodes and LEDs**. Demonstrations of simple circuits like rectifiers and LED glowing circuits were also shown.

## Outcomes of the Workshop

By the end of the workshop, students gained:

- A clear understanding of the **basic principles of electrical and electronic engineering**.
- Practical skills in wiring, measurement, and circuit connections.
- Familiarity with the use of measuring instruments and electrical safety practices.
- Awareness of how electrical systems are designed, tested, and maintained.
- Confidence in identifying and using electronic components in small projects.

The workshop successfully encouraged teamwork, curiosity, and problem-solving skills among students, preparing them for advanced courses such as microcontrollers, embedded systems, and industrial automation.

## Faculty Coordinators

- **Workshop Coordinator:** J. Suresh
- **Assistant Coordinator(s):** B. Pathrisamma , Ch. Sabitha
- **Technical Support:** Ch. Prasad

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COLLEGE OF ENGINEERING  
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NAAC A+ ACCREDITED  
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AICTE APPROVED  
PERMANENTLY AFFILIATED TO JNTUK

**DEPARTMENTS OF EEE & ECE**

**DAY-13**  
**WORKSHOP ON**

**BASICS OF ELECTRICAL & ELECTRONICS  
ENGINEERING**

**1ST YEAR IOT STUDENTS**



**Student Participation**

The BEEE Workshop saw enthusiastic participation from first-year B.Tech students from various departments. Students were divided into small batches to ensure effective hands-on training. The session was interactive, and students were encouraged to clarify their doubts and discuss real-world applications of the experiments.

### **Feedback and Conclusion**

The feedback collected from the participants indicated that the workshop was highly beneficial and informative. Students appreciated the opportunity to work directly with tools and instruments that are otherwise only discussed theoretically in class.

In conclusion, the **BEEE Workshop** was a great success, meeting its objective of providing students with a strong practical foundation in electrical and electronics engineering. It helped students understand the importance of safety, accuracy, and precision in electrical work and inspired them to explore advanced areas in the field.

**HoD**

**Dean-Academic**

**Principal**