



## DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ACADEMIC YEAR 2023-2024(ODD)

### REPORT – BRIDGE COURSE (II-EEE)

The Department of Electrical & Electronics Engineering conducted a bridge course for II-EEE students on September 20<sup>th</sup> (AN) and 21<sup>st</sup> (FN & AN), 2023. This program featured a diverse range of topics, including **Electromagnetic Fields, Mathematics, Digital Logic Circuits, C Programming and Electrical Machines**. The primary objective was to establish a strong foundation in these core subjects, equipping students with essential knowledge and skills as they continue their academic journey in the field of Electrical and Electronics Engineering.

#### PROGRAMME SCHEDULE

DATE & SESSION: 20.09.2023 & AN SUB: EE3301 – ELECTROMAGNETIC FIELDS

| TIME                | TOPICS                            | FACULTY INCHARGE           |
|---------------------|-----------------------------------|----------------------------|
| 01.10 P.M-02.40 P.M | ELECTRIC CHARGES AND FIELDS       | MRS. P. THIRUMAGAL, AP/EEE |
| 02.50 P.M– 04.20P.M | MAGNETIC FIELDS AND THEIR EFFECTS | Dr. S. VASANTHARAJ, AP/EEE |

#### PROGRAMME CONTENT:

The first session of the day was conducted by **Mrs. P. Thirumagal, Assistant Professor in the Electrical and Electronics Engineering Department**. She presented a comprehensive lecture on **"Electric Charges and Fields."** In this session, students were introduced to the fundamental concepts of electric charges, Coulomb's law, electric fields, and the behavior of charged particles. This forms the cornerstone of electromagnetism and provides students with a solid foundation for understanding electric phenomena in their future coursework.

Following a brief break, **Dr. S. Vasantharaj, Assistant Professor/EEE** discussed about the concept **"Magnetic Fields and Their Effects."** This session built upon the morning lecture, focusing on magnetic fields, magnetic materials, and their various practical applications in electrical engineering. Students learned about the interaction between magnetic fields and electric currents, the behavior of magnetic materials, and the principles of electromagnetic devices. This knowledge is essential for their future studies in electromagnetism and power systems.

DATE & SESSION: 21.09.2023 & FN

SUB: MA3303 – MATHEMATICS

SUB: EE3302 – DIGITAL LOGIC CIRCUITS

| TIME                  | TOPICS                                    | FACULTY INCHARGE                  |
|-----------------------|---|-----------------------------------|
| 09.15 A.M – 10.45 A.M | PROBABILITY AND RANDOM VARIABLES          | Dr. G. SHANKARAKALIDOSS, AP/MATHS |
| 11.00 A.M – 12.30 P.M | NUMBER SYSTEMS AND DIGITAL LOGIC FAMILIES | MR. S. RAMARAJAN, AP/ECE          |

**PROGRAMME CONTENT:**

The morning of the second day began with a mathematics session conducted by **Dr. G. Shankarakalidoss, Assistant Professor/ MATHS**. Students delved into "Probability and Random Variables," a crucial mathematical foundation for understanding uncertainty and randomness in engineering. He also explained the principles of probability, random variables, and probability distributions. This knowledge is vital for students when analyzing uncertain events and designing systems with probabilistic outcomes.

In the second half of the morning session, **Mr. S. Ramarajan, Assistant Professor /ECE** led an informative lecture on "**Number Systems and Digital Logic Families.**" This session bridged the gap between mathematics and digital logic, providing students with essential knowledge for their electronics studies. Students learned about different number systems, such as binary and hexadecimal, and how they relate to digital logic circuits. Additionally, Mr. Ramarajan introduced students to various digital logic families, emphasizing their importance in designing electronic circuits.

DATE & SESSION: 21.09.2023 & AN

SUB: CS3353 – C PROGRAMMING AND DATA

STRUCTURES

SUB: EE3303 – ELECTRICAL MACHINES-1

| TIME                 | TOPICS                              | FACULTY INCHARGE              |
|----------------------|-------------------------------------|-------------------------------|
| 01.10 P.M-02.40 P.M  | BASICS OF C PROGRAMMING LANGUAGE    | MS. S. ABIKAYILARTHI, AP/CSE  |
| 02.50 P.M– 04.20 P.M | INTRODUCTION TO ELECTRICAL MACHINES | MR. S. NAVEEN PRAKASH, AP/EEE |

**PROGRAMME CONTENT:**

In the afternoon, **Ms. S. Abikayilarthi, Assistant Professor /CSE** conducted a session on the "Basics of C Programming Language." This session is foundational for computer science students, as it provides essential programming skills for data structures and object-oriented programming. Ms.

Abikayilaarathi covered the basics of C programming, including syntax, data types, control structures, and functions. Students gained hands-on experience with writing and executing C programs, setting the stage for their future programming assignments.

The day concluded with an engaging session by **Mr. S. Naveen Prakash, Assistant Professor /EEE** on "Introduction to Electrical Machines." This session was designed to provide students with a comprehensive overview of electrical machines, a core subject in electrical engineering. He introduced the basic principles of electrical machines, different types of machines, and their applications in various industries. Students left the session with a solid understanding of the importance of electrical machines in modern society.

In summary, the program schedule for II EEE on 20th and 21st September 2023 provided students with a well-rounded introduction to various key subjects in their curriculum. Each session was conducted by experienced faculty members, ensuring that students received a solid foundation for their studies in electrical and electronics engineering, mathematics, digital logic, computer science, and electrical machines. These sessions equipped students with essential knowledge and skills necessary for their academic and professional growth in the field of electrical and electronics engineering.

**Captured Moments: Highlights of Bridge Course Program (II-EEE)**

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| <p>Exploring Electric Charges and Fields,<br/>Ms. P. Thirumagal, AP/EEE.</p> | <p>Getting Acquainted with Electrical Machines,<br/>Mr. S. Naveen Prakash, AP/EEE.</p> |

*P. Thirumagal*  
25/9/23  
**FACULTY INCHARGE**

*S. Naveen Prakash*  
29/9/23  
**HOD/EEE**

*J. Mani*  
30/9/2023  
**PRINCIPAL**