Course Type	Course Code	Name of Course	L	T	P	Credit
I	EEI101	Basics of Electrical Engineering	3	0	0	9

Course Objective

The main objective is to impart basic knowledge of Electrical Engineering to the students of various departments of the institute. The course structure is prepared in keeping view of the fact of applicability of the proposed course in different disciplines of engineering of the institute.

Learning Outcomes

Upon successful completion of this course, students will:

- Have basic knowledge of Electrical Engineering.
- Have an overall understanding of applicability in different fields.

Unit No.	Topics to be Covered	Lecture Hours	Learning Outcome
1	**Module 1:** Single-phase AC circuits: Generation of alternating emf, Definitions relating to alternating quantities, Phasor diagrams and phasor notations, Series and parallel AC circuits, Resonance and Q-factor.	5	Understanding operating principles in single phase AC system, Phasor diagram, phenomena of resonance in single phase AC circuit and solving mathematical problems on single phase AC circuit.
2	**Module 2:** Network theorems in DC and AC circuits: Superposition, Thevenin, Norton and Maximum Power Transfer theorems, Nodal and loop analysis in electrical circuit.	5	Understanding different network theorem and their application to solve numerical problems in electrical circuit.
3	**Module 3:** Three-phase AC circuits: Advantages and uses of three-phase systems, Star and Delta connection, Balanced three-phase loads.	4	Understanding operating principles of three phase AC system, measurement of power and solving numerical problems on three phase electrical circuits.
4	**Module 4:** Generation of electricity: Principle of operation, construction and application of transformers and induction motors.	6	Understanding different methods of generation of electricity, working principles of transformer and induction motor.

Text Books:

1. Electrical Engineering Fundamentals - V Del Toro, Publisher: Prentice - Hall International, Edition: 2

Reference Books:

1. Basic Electrical Engineering - D P Kothari and I J Nagrath, McGraw-Hill, Edition-3.
2. Fundamentals of Electrical Engineering – Ashfaq Husain & Haroon Ashfaq

Distribution of marks in examination: Quiz = 40% and End Sem = 60%

Total Marks = 100

1. Quiz 1 Full Marks = 20
2. Quiz 2 Full Marks = 20
3. Final Exam Full Marks = 100

P. K. Nayak	D. Sharma	Srinivas V. L.	K. Nandapurkar
02/01/2023	2/1/23	2/1/23	02/01/2023
Class Teacher Sec. E	Class Teacher Sec. F	Class Teacher Sec. G	Class Teacher Sec. H