Course Code: 1BBEEL107/207 **Course Name: Fundamentals of Electronics and Communication Engineering Lab**
Credits: 1 **L:T:P - 0:0:2**
CIE: 50% **SET: 50%**
SET Hours: 2 Hrs **SET Max. Marks: 50**

Prerequisites if any	Semiconductor physics
Learning objectives	1. To demonstrate the simulation and implementation of the hardware and analyse different electronic circuits.

Course Outcomes:
On the successful completion of the course, the student will be able to

COs		Bloom's level
CO1	Study, implement and analyse different electronic circuits.	L3

Mapping with POs and PSOs:

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11		PSO1	PSO2	PSO3
CO1	3	3	3	-	2	-	-	-	-	-	1		3	2	1

Mapping Strength: Strong– 3 Medium – 2 Low – 1 List of

experiments:

**** Familiarization of equipment's and components to be conducted before start of lab experiments.***

Sl. No.	Experiment	Hands on/ Virtual
1.	Characterisation of PN junction diode, Zener Diode, SCR.	Hands on
2.	Design and Testing of Half-Wave Rectifiers with and Without Filter for Determining Ripple Factor, Voltage Regulation, and Efficiency.	Hands on
3.	Design and Testing of Full-Wave Bridge Rectifiers with and Without Filter for Determining Ripple Factor, Voltage Regulation, and Efficiency.	Hands on
4.	Design and Testing of Clipping and Clamping Circuits to obtain desired Transfer Characteristics.	Hands on
5.	Analysis of Input and Output Characteristics of a Bipolar Junction Transistor in Common Emitter Configuration.	Hands on
6.	Study of Truth Tables for OR, AND, NOT, NAND, and NOR Gates Using Basic and Universal Gates.	Hands on
7.	Realization of canonical forms using logic gates.	Hands on
8.	Realization of Half/ Full Adder using Logic Gates.	Hands on
9.	Realization of Half/ Full Subtractor using Logic Gates.	Hands on
10.	Realization of Mux/Demux.	Hands on