2/4 B.Tech. THIRD SEMESTER
EE3L1   **ELECTRICAL CIRCUITS LAB**   **Credits: 2**
Lecture: -   **Internal assessment: 25 marks**
Lab   : 3 periods/week   **Semester end examination: 50 marks**
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Course Objectives:
*   Understand how to formulate and solve the basic electrical engineering problems.
*   Usage of laboratory tools for measurement and verification of theorems

Course Outcomes:
1. On completion of the lab student will know the verifications of Thevenin's Norton's, superposition, Maximum power, Compensation, Reciprocity, Millman's theorem
2. Student will able to draw Locus diagrams and resonane diagram for series and parallel circuits.
3. Students will be able to find different network parameters and able to measure 3Φ power drawn by different circuits.

Any 10 of the following experiments are required to be conducted:

1) Verification of Thevenin's and Norton's Theorems

2) Verification of Superposition theorem for DC and AC networks

3) Verification of Maximum Power Transfer Theorem

4) Verification of Compensation Theorem

5) Verification of Reciprocity, Millman's Theorems

6) Locus Diagrams of RL and RC Series Circuits

7) Series and Parallel Resonance

8) Determination of Self, Mutual Inductances and Coefficient of coupling

9) Determination of Z and Y Parameters

10) Determination of Transmission and Hybrid parameters

11) Measurement of Active Power for Star connected balanced load

12) Measurement of Reactive Power for balanced load (Star / Delta)

13) Measurement of 3-phase Power by two Wattmeter Method for balanced and unbalanced load (Star / Delta)

14) Time response of RC and RLC circuits