II Year I Semester	**L**	**T**	**P**	**C**
Code: 17EC312	**0**	**0**	**3**	**2**

DIGITAL ELECTRONICS LAB

Course objective:
To provide hand-on experience in designing and implementing digital/logic circuits. The laboratory exercises are designed to give students ability to design, build, and implement digital circuits and systems. The course uses standard ICs, wires and trainer kits and also uses tool i.e Multisim for simulation. Laboratory assignments progress from investigation of the properties of basic logic gates and to the design of combinational circuits and sequential circuits such as latches, flip-flops.

List of Experiments

Cycle-1
1. Logic gates – IC7408, IC7432, IC7404, IC7400, IC7402, IC7486
2. Implementation of Boolean expressions
3. ADDER & SUBTRACTOR
4. Error Detecting and Correcting codes
5. Decoder & Encoder
6. Multiplexer & De-multiplexer
7. Magnitude Comparator

Cycle-2
8. Realization of Boolean expressions with PROM, PLA/PAL
9. Flip Flops – D, SR, JK, T
10. Shift Register – Left/Right
11. Ripple Counter
12.Ring Counter
13. Johnson Counter

Requirements:
1. Basic logic gate IC's - IC7408, IC7432, IC7404, IC7400, IC7402, IC7486 & standard IC's
2. IC trainer Kits
3.Circuits Lab Software