II Year II Semester	L	T	P	C
17EC414	0	0	3	2

DIGITAL ELECTRONICS LABORATORY

Learning 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.

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

1. Realization of Boolean expressions with PROM, PLA/PAL
2. Flip Flops – D, SR, JK, T
3. Shift Register – Left/Right
4. Ripple Counter
5. Ring Counter
6. Johnson Counter