Course Name Digital Electronics Laboratory

Course Code EC(EE)491

Course Credit 3

Contact Hour 3P

Prerequisite

Course Objective

The main objective of this course is to obtain a basic level of Digital Electronics knowledge and set the stage to perform the analysis and design of complex digital electronic circuits.

Course Outcome

On completion of the course students will be able to

1. Realize and describe the operation of even parity generation and checking circuit
2. Identify and describe the six basic logic gates and combinational circuits in digital electronics.
3. Realize and describe the operation of MUX, decoders, adder, subtractor, BCD adder
4. Realize and describe the operation of 4 bit magnitude comparator circuit.
5. Identify and realize circuits using flip-flop.
6. Realize and describe the operation of synchronous/asynchronous up/down counter.

CO Mapping with departmental POs

H: High, M: Medium, L: Low

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO 1		M	H		L		L		M			
CO 2		H	M			L		M				
CO 3		H	M	M	L		L					
CO 4		M	H			L		M				
CO 5		H	M		L	M		H				
CO 6		M	H		M	M	L					

Course Content

list of experiments

1. Study of DAC & ADC
2. Realisation of basic gates using Universal logic gates.
3. Realisation of RS-JK & D filpflop using logic gates.
4. Design of Combinational circuit for BCD to decimal conversion to drive 7-segment display using Multiplexer.
5. Realisation of Synchronous Up/Down counter.
6. Construction of simple Decoder & Multiplexer circuits using logic gates.
7. Construction of adder circuit using Shift register & Full adder.