

Laboratory Name: Digital System Design Laboratory
Laboratory In-Charge: Dr. N.Vinodhkumar

Venue: 1433
Qualification: M.E., Ph.D.,

TECHNICAL MANPOWER

Laboratory Assistant: Mr. C. Srinivasa Rao
Qualification: DECE

DESCRIPTION ABOUT THE LABORATORY

The objective of this laboratory is to establish a strong understanding and to gain the basic principles of digital electronics by performing rigorous experiments from gate level to system level. The experimental set up helps the students to design and test digital circuits in hardware. This lab is offered to B.Tech ECE students and it is specially designed and developed for the students to learn about combinational and sequential digital logic circuits using IC trainer kits.

OBJECTIVES

- ✓ To gain knowledge of fundamental logic gates (AND, OR, NOT, NAND, NOR, XOR, XNOR).
- ✓ To design and implement combinational circuits like multiplexers, demultiplexers, encoders and decoders.
- ✓ To learn about flip-flops (SR, D, JK, T) and design sequential circuits.
- ✓ To implement real-world applications of digital circuits.

LABORATORY SPACE AND STUDENT ALLOCATION

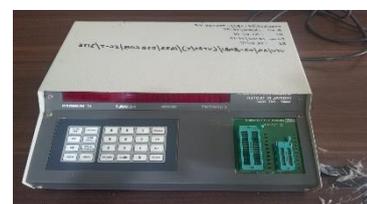
Area of the Laboratory : 160 sq.m
No. of students per session : 30
Batch Size : 3 students / batch
Weekly Utilization Status : 28 hours / week

COST OF THE LABORATORY

✓ **Total cost of equipment's** : Rs. 6,28,328



Digital IC Trainer Kit



Digital IC Tester



Function Generator



Digital Storage Oscilloscope



Dual Regulated Power Supply

LIST OF MAJOR EQUIPMENT

HARDWARE			
S.No	Equipment Name	Quantity	Cost (Rs.)
1	Digital IC Trainer Kit	54	3,46,750
2	Digital IC Tester	5	52,210
3	Digital Storage Oscilloscope	6	1,77,832
4	DC Power Supply	8	40,886
5	Function Generator	1	10,650
Total Cost			6,28,328

Target Users

- ✓ Undergraduate Students