

PULSE & DIGITAL CIRCUITS LABORATORY

Objective: This laboratory aims to produce graduates to design a pulse circuits and to verify functionality of digital circuits along with their applications. This course makes the student solve engineering programming problems which lays foundation to analyze pulse circuits.

The student will acquire knowledge to design multivibrators (using Transistors), filters, switch (using Transistor), Time base generators, Clippers and Clampers. The students will be able to realize logic gates using discrete components, and applications of Combinational and sequential Circuits.



Sections Handled: B.Tech III Year I Semester – ECE - A&B Sections

Major Equipment Details:

S. No	Name of the Equipment/Make/Model No	Quantity	Unit Price	Total Cost
1.	Dual Channel Regulated Power supply 0-30V, 2A Make: PHYSITECH Model No: PHY 8230D	15	5,145.00	77,175.00
2.	Function generator 2MHZ Make: PHYSITECH Model No: PHY 103ML	15	6,090.00	91,350.00
3.	3 ¹ / ₂ Digit Multimeter Make: CIE Model No: 123	16	1,732.50	27,720.00
4.	0-20V DC Voltmeter Make: PHYSITECH	15	829.50	12,442.50
5.	0-200mA DC Ammeter Make: PHYSITECH	15	829.50	12,442.50
6.	0-200μA Ammeter Make: PHYSITECH	08	829.50	6,636.00
7.	Bread Board Make: WISH Model No: WB 102	30	189.00	5,670.00
8.	CRO Probes	30	157.50	4,725.00
9.	Analog Oscilloscope Make: SCIENTECH Model No: Scientech 804	15	17,115.00	2,56725.00
10.	Linear & Digital IC Trainer Kit Make: PHYSITECH Model No: PHY 403A	10	7,749.00	77,490.00
Total Cost				Rs.5,72,376.00

Faculty In charge with qualification: Mrs.K.Lakshmi Sowjanya, M.Tech**Lab Technician name with qualification:** Mrs. D.Sirisha, B.Tech**Experiment list as per curriculum:**

1. Linear wave shaping.
2. Non Linear wave shaping – Clippers.
3. Non Linear wave shaping – Clampers.
4. Transistor as a switch.
5. Study of Logic Gates & Some applications.
6. Study of Flip-Flops & some applications.
7. Sampling Gates.
8. Astable Multivibrator.
9. Monostable Multivibrator.
10. Bistable Multivibrator.
11. Schmitt Trigger.
12. UJT Relaxation Oscillator.
13. Bootstrap sweep circuit.

Experiment list beyond the curriculum

1. RC Circuit acts as Integrator and Differentiator
2. Design of Bistable Multivibrator with Commutating Capacitors