



Analog Electronics Laboratory

B. Tech. (Electronics and Communication)
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Analog Electronics Laboratory

Objective of Laboratory:

To provide practical, hands-on experience with semiconductor devices.

Student learning outcomes / objectives:

Understand basic electronics devices and electrical circuits.

Practical List:

Sr. No.	Analog Electronics	Hours
1	To study V-I characteristic of PN Diode.	2
2	To study V-I characteristic of Zener Diode.	2
3	To Study Zener Diode as a Voltage Regulator.	4
4	To study Positive and Negative Clipper Circuit	2
5	To Study Clamper circuit using diode.	2
6	To Study Half Wave Rectifier.	2
7	To Study Full Wave Rectifier.	2
8	To Study Input and Output Characteristics of NPN transistor in CE configuration.	2
9	To study Characteristics of FET in Common Source Configuration.	2
10	To study Class A power Amplifier.	2
11	To study the DTL NAND and RTL NOR Gate and plot its transfer characteristics. Also find the noise margin.	2
12	To study transistor as an amplifier (CE)	2
13	To study frequency response of single stage common emitter (CE) amplifier.	2
14	To calculate H-parameter of transistor in CE configuration.	2
15	To study the operation of multistage RC – Coupled amplifier and study its frequency response.	2
16	To find out input & out-put impedance of given current series negative feedback amplifier.	2
17	To study the operation of hartley oscillator.	2
18	To study and performance of the phase shift oscillator with and without buffer between RC sections.	2
19	To study and performance of the operation of Colpitt's oscillator.	2

Laboratory equipment



Well-equipped Laboratory

Laboratory equipment



Different Trainer kits for Hands Experience to Students

Laboratory equipment



Different Trainer kits for Students

Laboratory equipment



Electronic Component experiment kit

Laboratory equipment



Other practical hands on kits.

Components Available in Laboratory

1	Power Supply
2	Function generator
3	CRO
4	DSO
5	Trainer
6	Digital Multimeter
7	Analog current meter
8	Resistance Box
9	Capacitance Box
10	Inductance Box
11	Bread Board

Kits Available in Laboratory

1	Diode Characteristics
2	Transistor characteristic common base NPN
3	Transistor characteristic common base PNP
4	Transistor characteristic common emitter NPN
5	FET characteristic
6	Rectifier circuits
7	Darlington pair
8	Common emitter amplifier

9	RC coupled Amplifier
10	Cascade Amplifier
11	Class A amplifier
12	Class B Push Pull Emitter Follower
13	Class C tuned Amplifier
14	Multi-vibrators cascade/mono
15	Zenor voltage regulator
16	Transistor series voltage regulator
17	Schmitt trigger & comparator
18	Active filters
19	Phase shift oscillator
20	Wein Bridge oscillator
21	Colpitts Oscillator
22	Optical transducer photovoltaic cell
23	Optical transducer Photoconductive cell LDR
24	Photo transistor
25	Common collector Amplifier