

**DEPARTMENT-WISE EQUIPMENT DETAILS****ELECTRONICS & TELECOMMUNICATION ENGINEERING**

Sr. No	Name of Department	Total No. of Labs
03	Electronics & Telecommunication Engineering	06
Total		06

Sr. No.	Name of Laboratory
1	Basic Electrical & Electronics Engineering Lab
2	Electronics Circuit and Design Lab
3	Communication Lab
4	Project Lab
5	Microprocessor & Microcontroller Lab
6	Microwave Engineering Lab

LAB NAME :BASIC ELECTRICAL & ELECTRONICS ENGINEERING LAB


Usage:
Conduction of
BEEE &
Electronics
Workshop Practical
of FY B.Tech.
students

- Three Phase Dimmer 15 AMP
- single phase dimmerstate 0-270 v 10 A
- WATT METER 150/300/600 V 5/10 , 150/300/600 V 5/2 AMP
- SINGLE PHASE TRANSFORMER 1 KV 230V / 110 V
- Display Board of Different Fixed & Variable Resistor,
- Fixed & Variable Capacitors, Inductor, Switches, Relays.
- Semiconductor (PN Junction) Diode characteristics
- Half, Full Wave & Bridge Rectifier with & without filters
- Temperature Measurement using RTD
- Logic Gate trainer using IC
- NAND & NOR As Universal Gates
- Boolean Expression Using Logic Gates
- Single Stage CE Amplifier
- Analog and Digital Circuit Lab Trainer
- "Single DC Power Supply 0-30V/0-2A with 2 Digital Meters(2 * 4590)"
- Bread Board Trainer, LVDT Trainer
- Regulated DC Power supply 0-30V/2A, 5V/1A
- Full wave rectifier & Half wave rectifier
- Temp. Transducer RTD/PT100

LAB NAME :ELECTRONICS CIRCUIT AND DESIGN LAB

Usage:

Conducting Third Year B.Tech Lab (Electronics circuit & Power Electronics Lab)

- Frequency response of two stage RC coupled amplifier. Frequency response of single stage RC coupled CE amplifier.
- Voltage series feedback amplifier.(Push-Pull Emitter Follower Class-B)
- RC Phase shift oscillator
- Wein-Bridge oscillator.
- Class A Power amplifier
- Complimentary Symmetry Power amplifier.-Class-B
- Power Supply trainer
- Astable Multivibrator using transistor
- Monostable Multivibrator using transistor
- Astable Multivibrator using IC 555. Monostable Multivibrator using IC 555
- Design and implementation of relay driver circuit.
- V-I characteristics of JFET.
- Application of MOSFET as a switch.
- Clipper, clamper Circuits.

LAB NAME : COMMUNICATION LAB**Usage:**

SY B.Tech Lab
(Analog & Digital
Communication
Lab)

- FSK, PSK, ASK ,QPSK & DPSK Modulation & demodulation and data formatting
- PCM, DPCM ,ADM ,PCM-Demodulator and Demodulator
- DSB/SSB Transmitter (AM TRANSMITTER)
- DSB/SSB Receiver (AM RECEIVER)
- FM Modulation & Demodulation
- PAM Modulation & Demodulation
- Multi-meter
- 3 MHz Function Generator
- DC POWER SUPPLY 0-30V 2AMP
- 50 MHz Dual Channel DSO

LAB NAME :PROJECT LAB


- HP Laser jet 1020 Printer
- Computer System Desktop Intel I5, RAM 8 GB, HDD 1 TB , USB Keyboard USB Mouse , HP Make Monitor
- PCB Coater cum photoresist Dryer
- Both Side Exposure
- Easy Ethcher
- Easy Drilling Machine
- Proto circular Saw

Usage:

For conducting EDC and ICA Lab for SY B.Tech students as well as can be utilized for testing Student's Projects (Mini/Micro Project)

LAB NAME : MICROPROCESSOR & MICROCONTROLLER LAB.

Usage:

Lab is used for TY B.Tech students for conducting practicals of Microcontroller & Embedded Systems.

- 8051 Universal Development Platform with ON BOARD INTERFACING
- PIC Microcontroller Development Board ON BOARD INTERFACING
- Boolean Expression Using Logic Gates
- Logic Gate trainer using IC
- Half & Full Adder & Subtractor
- BCD to Decimal Code Converter
- Binary to Gray Code converter & Gray to Binary Code Converter
- Four Bit Comparator
- Four Bit Adder & Subtractor using IC 7483
- Multiplexer 4:1 using IC 74153 & 8:1 using IC 74151
- BCD to Seven Segment Decoder (Common Cathode Display)
- Four Bit Universal Shift Registers
- Johnson & Twisted Type Ring Counter
- Clock Oscillator using Gates
- Up-Down Counter using IC 74192
- Synchronous Counter
- Flip- Flop Trainer (all types)
- Digital Circuit Lab Trainer
- Four Bit Binary Ripple counter
- Demultiplexer 1:8 using IC 74138 (3:8 Decoder)

**LAB NAME : MICROWAVE ENGINEERING LAB**

- MICROWAVE TEST BENCH (GUNN BASED)
- Antenna Trainer Kit
- OPTICAL FIBER TRAINER KIT

Usage: Lab is used for Final year students and can also be used for MICROWAVE Engineering practical.