

VARIOUS LABORATORIES OF ECE DEPARTMENT

ANALOG ELECTRONICS LAB

Analog Electronics is one of the basic lab of Electronics Department. Here students learn to perform experiments on kits such as Diode and their Characteristics, Transistor biasing types, single stage and Multistage Amplifier, Wave shaping circuits, positive and negative voltage regulator, various types of multivibrator etc. There are large numbers of experimental kits available for the students along with various basic equipments like DSO (Digital Storage Oscilloscope), Analog CRO, Digital Multimeter, Function Generator, Bread Board etc.



MICROPROCESSOR LAB

This lab has various types of microprocessor, micro controller trainer kits (8051) along with interfacing modules such as Stepper Motor, Analog-to-Digital converter, Seven Segment display to demonstrate the detailed applications of microprocessors and microcontroller. It is equipped with Digital Electronic Trainer Boards, DSO etc. The purpose of this laboratory is to train the students to

be familiar with the software and hardware of microprocessors and microcontroller so that they can gain enough experiences in the era of microcontroller which bring intelligence to many products of our daily use.



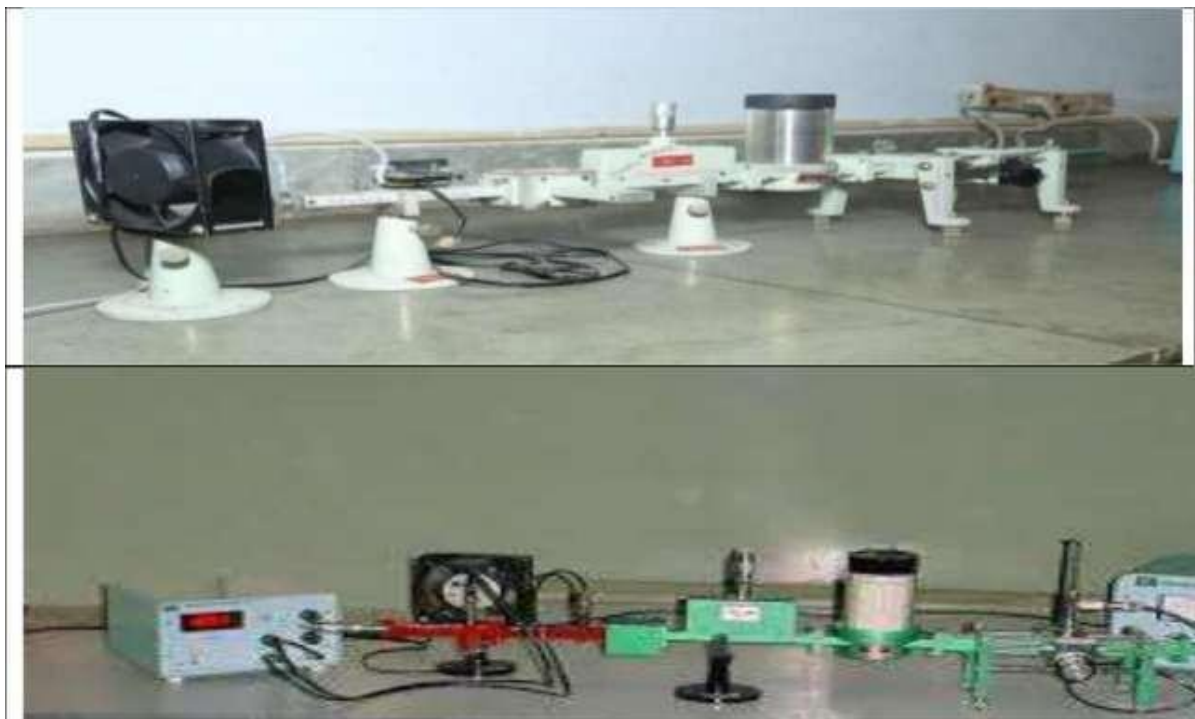
POWER ELECTRONICS LAB

Power electronics lab enhances ECE students by providing them the better understanding of the concepts and working of power semiconductor devices & power Electronics circuits. Experiments include the study of SCR TRIAC , DIAC,UJT etc. Major equipments are UJT Kit, SCR Kit, Single phase full wave controlled rectifier, Bridge Rectifier etc.



COMMUNICATION ENGINEERING LAB

This Lab focuses on training the students in both analog and digital transmission/reception of signal. The students perform experiments of Modulation like AM, FM and observe waveform on DSO. The lab consists of ASK, FSK, PSK, analog signal sampling kit, Microwave Test benches as well. The microwave bench available in this laboratory has Reflex Klystron as a microwave source and is designed to accommodate an X-band signal (8–12 GHz). Complete micro bench consists of slotted section, Isolator, Frequency meter, Directional coupler etc. Experiments like to know VSWR, Electronics and Mechanical Tuning, to find guided wavelength, Horn Antenna radiation pattern are performed.



DIGITAL ELECTRONICS LAB

Here Students learn the basic working of Digital Electronics Circuits. The experiments included in the syllabus cover majority of digital circuits like Logic Gates, Multiplexer, de-multiplexer, encoder, decoder, flip-flop, counters registers, Digital Multimeter, Soldering Station, Bench Power Supply, Oscilloscope, Breadboards, IC's etc. Digital Electronics is essential concept to acquire the knowledge of computer as well.



AUDIO VIDEO SYSTEM LAB

Audio-video system lab is well equipped with all the kits, required for practicals. Microphone and speaker kits are used to observe the frequency response and graph plotting of input and output signals wire connections of PA systems. Also PA system is operated by students for small gathering, guests' lectures and workshops. Black and White and colour TV training kits are available for observing different wave shapes and voltage level of the signals. CD and Cassette players are used for understanding the mechanism of magnetic recording and retrieving of the audio signal. LED colour TV and DTH system is available for watching the educational programs.



PCE LAB and WMC LAB:-

PCE Lab focuses on training the students in analog communication. Students learn analog area of communication by constructing the circuits of AM, FM, PM. Students do experiments with the help of function generator and CRO/DSO. In the area of pulse techniques, faculty helps them in PAM, PPM & PWM experiments.

WMC lab focuses on wireless communication techniques and experiments. In this lab students also trained about basics of cellular mobile and antenna with the help of trainer kits.



IOT & AI LAB:-

Internet of Things and Artificial intelligence are both unique technologies on their own, but what makes them even more interesting is where they intersect. As the applications of IOT and AI are independently fascinating, their combined use cases hold even more captivating potential, according to researchers and industry experts. In this lab, the students are trained for making small applications of IOT with the help of trainer board of arduino uno and run them on computer system.

