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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

COURSES :

UG : ELECTRONICS AND COMMUNICATION ENGINEERING : 120 (Intake)

 LABORATORIES : ECE

 1. Electronic Devices and Circuits Lab

2. Electronic Circuit Analysis Lab

3. Analog Communications Lab

4. Pulse and Digital Circuits Lab

5. Linear I C Applications Lab

6. Digital I C Applications Lab

7. Micro Processors & Micro Controllers Lab

8. VLSI Lab

9. Digital Communications Lab

10. Micro Wave Engineering & Optical Lab

11. Digital Signal Processing Lab

ELECTRONIC DEVICES AND CIRCUITS & ELECTRONIC CIRCUIT ANALYSIS LAB

The Electronic Devices and Circuits Lab focuses on imparting Basic Electronics Knowledge to the Students. In this Lab the Students will learn about basic Electronic Devices such as Diode, BJT, FET, UJT etc ., The Students will also verify different devices V-I Characteristics.

In the Electronic Circuit Analysis Lab the Students will learn how to design different Electronic Circuits such as Amplifiers using BJT and FET. They will learn working and design of Power Amplifiers.

PULSE AND DIGITAL CIRCUITS LAB AND LINEAR I C APPLICATIONS LAB

The Pulse and Digital Circuits Lab focuses on design of various for Linear and Non Linear Wave shaping Circuits. The Student will learn the design and analysis of various Multivibrators. The Student will understand the functioning of different types of time-base Generators. The Student will learn the working of logic families.

The Linear IC application Lab focuses on Study of OP-AMPs and their applications like Oscillator Circuits and Active Filter Circuits of LPF,HPF,BPF,BSF. The Students will also learn about Timer Circuits and Various Voltage Regulators.

ANALOG COMMUNICATIONS LAB AND DIGITAL COMMUNICATIONS LAB

The Analog Communication Lab focuses on learning of different Modulation schemes such as AM,FM and different modulation techniques like PPM,PWM,PAM. The Students will Simulate the Modulation Techniques using MATLAB tool. The Students will also use SIMULINK tool for Virtual design of Modulation Techniques.

The Digital Communication Lab focuses on learning about Multiplexing Schemes like TDM. The students will learn Shift keying techniques PSK,DPSK. The students will learn about Code Modulation Techniques of PCM, DPCM, DM. The students will learn encoding techniques like HAMMING CODE,CRC.

MICRO PROCESSORS & MICRO CONTROLLERS LAB
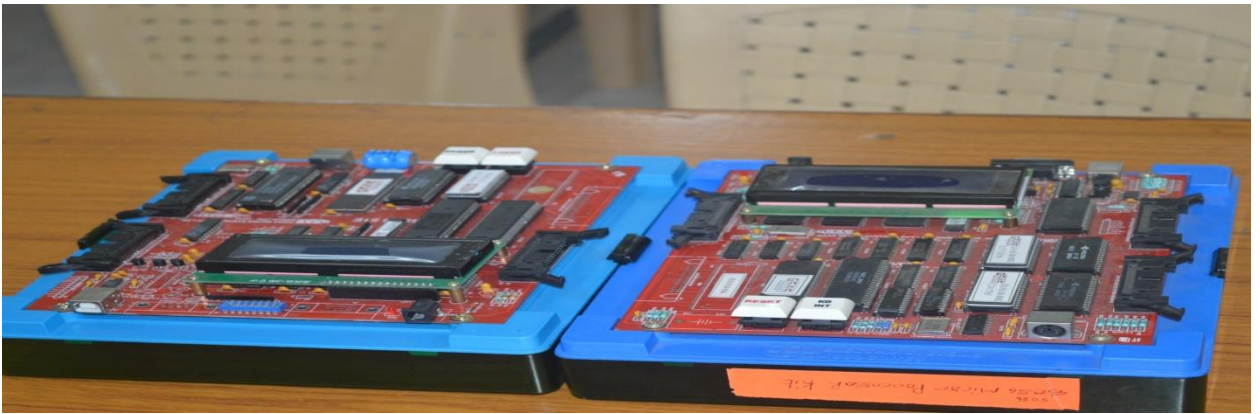
The MPMC Lab focuses on learning 8086 Assembly Language Programming using MASM software, 8086 Interfacing, 8051 Assembly Language Programs and 8051 Interfacing. The MPMC Lab will helpful for the Students in doing their Major and Minor Projects. The Lab is equipped with KEIL software for doing Microcontroller Programming. The lab is also equipped with PROTEUS Software for implementation of Minor Projects on Embedded Systems and IOT.

MICRO WAVE ENGINEERING & OPTICAL LAB

The Microwave Engineering & Optical Lab focuses on learning about Reflex Klystron Characteristics and Gunn Diode Characteristics. The Lab will also help the Students for learning of Characterization of LED and Laser Diode. The Lab is possessing Microwave benches Setups of Reflex Klystron and Gunn Diodes. The Optical Characteristics such as Numerical Aperture, Bending Losses can also be verified for Optical Fibers using this Lab. The Micro wave devices such as Magic Tee , Circulator, Directional Coupler characteristics can also be verified with Micro wave Bench Setup.

VLSI LAB AND DIGITAL SIGNAL PROCESSING LAB

The VLSI Lab focuses on Design and Implementation Small Scale Digital and Analog Circuits. Verification and Analysis of Digital and Analog Circuits at Switch Level is done with the help of Mentor Graphics Software.

The DSP Lab focuses on learning about 1-D , 2-D, 3-D signal modeling. The Lab is equipped the MATLAB tool for Simulating the Projects. The MATLAB tool is useful for design of Systems with Real-time Environment Parameters.