

## **COURSE OUTCOMES**

### **B.Sc. I Year Electronics**

- Understand electronic systems with a continuously variable signal
- Understand proportional relationship between a signal and a voltage or current that represents the signal.
- To learn function of basic component's use in linear circuits.
- Understand component symbol, working principle, classification and specification.
- To learn different theorems for simplification of basic linear electronics circuits.
- Understand basic digital electronic systems
- To learn function of basic digital circuits and use of transistors to create logic gates in order to perform Boolean logic.
- To learn different theorems for simplification of basic Digital electronics circuits.
- Student understand symbols, Truth tables, Boolean equations, & working principle.
- Understand Basic Circuits using Active Devices
- Learn function of basic circuit components used in linear circuits.
- Understand basic construction, equivalent circuits and characteristics of basic electronics devices.
- Students understand basic linear electronics circuits and their working principle
- Understand combinational and logical digital circuits and their differences.
- Students will be introduced to Flip-flop, shifts register, counters and Semiconductor memory for data Processing circuits.
- To learn symbol, working principle of basic Digital electronics circuits for data processing application.
- At the end of this course, students should be able to recognize and analyze the basic digital circuits.

## **COURSE OUTCOMES**

### **B.Sc. II Year Electronics**

- To understand Basic Analog Circuits and their applications using Active Devices
- To learn basic function of single stage amplifier, multistage amplifier and power Amplifier and their working principle.
- To understand basic construction of feedback circuits and their application in Oscillators
- understand basic amplifier and oscillator circuits and their application in analog circuits.
- To understand Basic Analog and digital meters for measurement of various electrical parameter.
- To learn basic test instruments such as power supply ,function generator, DFM and CRO and their construction and working principle.
- To understand basic principle of transducers and their construction
- Working principle, classification and application in various fields.
- Students understand the construction of data convertor circuits and their applications in digital circuits.
- To understand Basic differential amplifier and their applications in linear Integrated circuits
- To learn basic function of operational amplifier, Ideal and practical characteristics and their mathematical application.
- To understand basic construction of active filters, comparators and their application in electronics.
- Students understand different types of multivibrator and wave form generator using IC 555.
- To understand the basic architecture of 8- bit microprocessors.

- Able to write programs on 8085 microprocessor based systems.
- Identify the addressing modes of an instruction.
- Develop programming skills in assembly language.

## **COURSE OUTCOMES**

### **B.Sc. III Year Electronics**

- Understand the fundamental concept of semiconductor like crystal structure, energy band gap, charge carrier statistics.
- Understand the physics, basic characteristics and operation of semiconductor devices such as p-n junctions and Zener diodes
- Have knowledge of fabrication technology for semiconductor devices and integrated circuits
- Conceptual understanding of electrostatic law.
- Conceptual understanding of the electromagnetic laws, set up a model and perform the necessary calculations.
- Have knowledge of electromagnetic waves and their propagation.
- Understand the basic concept of communication system.
- Understand AM , FM and demodulation.
- Understand antenna and radio wave propagation used in communication system.
- Understand basic concept of digital communication system.
- Understand the fiber optic communication.
- Understand computer network and security.
- To understand basic architecture of 16 bit microprocessors.
- Able to write programs on 8086 microprocessor based systems.
- Illustrate the organization of registers and memory in microprocessors.
- Differentiate Minimum and Maximum Mode bus cycle.
- Identify the addressing mode of an instruction.
- Develop programming skills in assembly language.
- Understand interrupt and interrupt service routine.
- Understand I/O interfacing and techniques.
- Understand advance microprocessor.
- Understand basic of the programming language
- Able to switch any other programming language
- Able to write C program for simple real life applications using structures.
- Find root of equation by different numerical methods
- Find out differentiation and integration of equation
- Solve linear equation system.
- Simulate electronic circuits numerically.
- Ability to differentiate microprocessor and microcontroller.
- Describe the architecture of 8051
- Able to write assembly language program for 8 bit microcontroller
- To write interfacing programming.
- To identify embedded systems in various applications.
- To write advanced microcontroller programming for real life application.
- To design advanced digital systems.
- Understand the Hardware Description Languages (HDL).
- Design combinational and sequential logic circuits using VHDL.
- Understand power semiconductor devices used in industries.
- Understand the construction and working of different power semiconductor devices
- Analyze various triggering circuits used for different semiconductor devices
- Design power electronic circuit for real time application like rectifier and convertor etc.