

DEPARTMENT OF ELECTRONICS

COURSE OUTCOMES

BASIC CIRCUIT THEORY

SEMESTER - I

CO#	Course Outcome
CO1	Study basic circuit concepts in a systematic manner suitable for analysis and design.
CO2	Understand transient analysis.
CO3	Determine AC steady state response.
CO4	Analyze the electric circuit using network theorems.
CO5	Understand the two-port network parameters.

SEMESTER - II

ELECTRONIC DEVICES & CIRCUITS

CO#	Course Outcome
CO1	Describe the behavior of semiconductor materials.
CO2	Illustrate about rectifiers, transistor and FET amplifiers and its biasing. Also compare the Performances of its low frequency models.
CO3	Describe the frequency response of MOSFET and BJT amplifiers.
CO4	Explain the behavior and characteristics of power devices such as UJT.

SEMESTER - III

ANALOG ELECTRONICS & DIGITAL PRINCIPLES

CO#	Course Outcome
CO1	Explain the concepts of feedback and construct feedback amplifiers and oscillators.
CO2	Summarizes the performance parameters of amplifiers with and without feedback.
CO3	Perform analysis of two stage R -C coupled Amplifier
CO4	Understand Op - Amp basics and its various applications.
CO5	Become familiar with number systems and codes, Logic Gates.

SEMESTER - IV

DIGITAL ELECTRONICS & DIGITAL IC APPLICATIONS

CO#	Course Outcome
C01	Become familiar with Boolean Algebra Theorems.
C02	Summarizes the performance parameters of amplifiers with and without feedback.
C03	Understand the minimization techniques for designing a simplified logic circuit.
C04	Design a half Adder, Full Adder, HalfSubtractor, Full-Subtractor.
C05	Understand the working of Data processing circuits Multiplexers, Demultiplexers, Decoders, Encoders.
C06	Become familiar with the working of flip -flop circuits, its working and applications.

SEMESTER - V

MICROPROCESSOR PROGRAMMING & APPLICATIONS

CO#	Course Outcome
C01	Understand the basic blocks of microcomputers i.e. CPU, Memory, I/O and architecture of microprocessor 8085.
C02	Apply knowledge and demonstrate proficiency of designing hardware interfaces for memory and I/O as well as write assembly language programs for target microprocessor 8085.
C03	Derive specifications of a system based on the requirements of the application and select the appropriate Microprocessor

SEMESTER - V

ELECTRONICS COMMUNICATION SYSTEMS

CO#	Course Outcome
C01	Understand the basic concept of a communication system and need for modulation.
C02	Evaluate modulated signals in time and frequency domain for various continuous modulation techniques.
C03	Describe working of transmitters and receivers and effect of noise on a communication system.
C04	Understand the basics of a digital communication system.
C05	Understand the basics of an optical communication system.
C06	Understand the working of satellite communication.
C07	Understand the working of a cellular communication system.

SEMESTER - VI

MICROCONTROLLERS & INTERFACING

CO#	Course Outcome
C01	Understand the architecture of a 8051 microcontroller.
C02	Write simple programs for 8051 microcontroller.
C03	Understand key concepts of 8051 microcontroller systems like I/O operations, interrupts, programming of timers and counters.
C04	Interface 8051 microcontroller with peripherals.
C05	In the laboratory, students will program 8051 microcontroller to perform various experiments.

SEMESTER - VI

EMBEDDED SYSTEMS DESIGN

CO#	Course Outcome
C01	Understand the concepts related to embedded systems and architecture of microcontrollers.
C02	Familiarize with serial bus standards.
C03	Design systems for common applications like general I/O, counters, PWM motor control, data acquisition etc.
C04	Familiarize with the programming environments used in robotics applications.
C05	Understand the working of sensors, actuators and other components used in design and Implementation of robotics.

SEMESTER - VI

CONSUMERS ELECTRONICS

CO#	Course Outcome
C01	Familiarization with various types of audio systems.
C02	Familiarization with TV and video systems.
C03	Familiarization with telephony and office equipment.
C04	Familiarization with various domestic gadgets/appliances

SEMESTER - VI

POWER ELECTRONICS

CO#	Course Outcome
C01	Explain the basic principles of switch mode power conversion, models of different types of power electronic converters including dc-dc converters, PWM rectifiers and inverters.
C02	Choose appropriate power converter topologies and design the power stage and feedback controllers for various applications They use power electronic simulation packages for analyzing and designing power converters
C03	Describe the operation of electric machines, such as motors and their electronic controls.
C04	Analyze the performance of electric machine.