DEPARTMENT OF ELECTRONICS

COURSE OUTCOMES

NETWORK ANALYSIS AND ELECTRONIC DEVICES

SEMESTER – I

CO#	Course Outcome
CO1	To understand the concept of Voltage and Current Sources, Network Theorems, Mesh and Node Analysis.
CO2	To become familiar with the Characteristics of the BJT Configurations, biasing, stabilization and their Applications.
CO3	To be able to perform small signal analysis of Amplifier and understand its Classification.
CO4	To be able to perform analysis of Two Stage R-C Coupled Amplifier.
CO5	To understand the Concept of Positive and Negative Feedback along with Applications of each type of Feedback and the Working of Oscillators.
CO6	To become familiar with Construction, Working and Characteristics of JFET, MOSFET and UJT.
CO7	To develop an understanding of the Basic Operation and Characteristics of Photoelectric Devices.
CO8	To become familiar with Half-wave, Full-wave and Bridge Rectifiers Ripple Factor and Efficiency.

SEMESTER – II

LINEAR AND DIGITAL INTEGRATED CIRCUITS

CO#	Course Outcome
CO1	To understand Op- Amp Basics and its various Applications.
CO2	To become familiar with Number Systems and Codes, Logic Gates, Boolean Algebra Theorems.
CO3	To understand the Minimization Techniques for designing a simplified Logic Circuit.
CO4	To design Half Adder, Full Adder, Half-Subtractor and Full-Subtractor Circuits.
CO5	To understand the working of Data Processing Circuits Multiplexers, De-multiplexers, Decoders and Encoders.
CO6	To become familiar with the working of Flip-Flop Circuits, its working and applications.

ELECTRONICS COMMUNICATION SYSTEMS

CO#	Course Outcome
CO1	Familiarization with the basic Concepts of a Communication System and need for Modulation.
CO2	To become familiar with an insight on the use of different modulation and demodulation techniques used in Analog Communication.
CO3	To Learn the generation and detection of a signal through Pulse and Digital Modulation Techniques and Multiplexing.
CO4	In-depth understanding of different Concepts used in a Fiber Optic Communication, Satellite Communication.
CO5	To Understand the Mobile Radio Propagation, Cellular System Design, Mobile Technologies like GSM and CDMA, Mobile Communication generations 2G, 3G,4G and 5G with their Characteristics and Limitations.

MICROPROCESSOR SYSTEMS

CO#	Course Outcome
CO1	The student can gain good knowledge on Microprocessor and implement it in Practical applications.
CO2	To understand the Assembly Language Programming essentials.
CO3	To understand and devise techniques for faster execution of instructions, improve speed of operations and enhance performance of Microprocessors.
CO4	To understand Concept of Multi Core Processors and its advantages.

MICROCONTROLLER SYSTEMS

CO#	Course Outcome
CO1	To understand the architecture of 8051 Microcontroller.
CO2	To understand key concepts of 8051 Microcontroller Systems like I/O Operations, Interrupts, Programming of Timers and Counters.
CO3	To understand Interfacing of 8051 Microcontroller with Peripherals.
CO4	In the laboratory, students will Program 8051 Microcontroller to perform various experiments.

MICROPROCESSORS, PROGRAMMING AND APPLICATIONS

CO#	Course Outcome
CO1	Understand the basic blocks of microcomputers i.e. CPU, Memory, I/O and architecture of microprocessor 8085.
CO2	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.
CO3	Derive specifications of a system based on the requirements of the application and select the appropriate Microprocessor.

ELECTRONIC COMMUNICATION SYSTEM

CO#	Course Outcome
CO1	Understand the basic concept of a communication system and need for modulation.
CO2	Evaluate modulated signals in time and frequency domain for various continuous modulation techniques.
CO3	Describe working of transmitters and receivers and effect of noise on a communication system.
CO4	Understand the basics of a digital communication system.
CO5	Understand the basics of an optical communication system.
CO6	Understand the working of satellite communication.

SEMESTER – VI

MICRO CONTROLLERS AND INTERFACING

CO#	Course Outcome
CO1	Understand the architecture of a 8051 microcontroller.
CO2	Write simple programs for 8051 microcontroller.
CO3	Understand key concepts of 8051 microcontroller systems like I/O operations, interrupts, programming of timers and counters.
CO4	Interface 8051 microcontroller with peripherals.
CO5	In the laboratory, students will program 8051 microcontroller to perform various experiments.

EMBEDDED SYSTEMS DESIGN

CO#	Course Outcome
CO1	Understand the concepts related to embedded systems and architecture of microcontrollers.
CO2	Familiarize with serial bus standards.
CO3	Design systems for common applications like general I/O, counters, PWM motor control, data acquisition etc.
CO4	Familiarize with the programming environments used in robotics applications.
CO5	Understand the working of sensors, actuators and other components used in design and Implementation of robotics.

CONSUMERS ELECTRONICS

CO#	Course Outcome
CO1	Familiarization with various types of audio systems.
CO2	Familiarization with TV and video systems.
CO3	Familiarization with telephony and office equipment.
CO4	Familiarization with various domestic gadgets/appliances

POWER ELECTRONICS

CO#	Course Outcome
CO1	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.
CO2	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
CO3	Describe the operation of electric machines, such as motors and their electronic controls.
CO4	Analyze the performance of electric machine.