



Estd : 2008

Accredited by NAAC with A+ and NBA
Affiliated to Osmania University & Approved by AICTE

Department of Electronics and Communication Engineering

Course Outcomes

AY: 2022-23

III Semester

SNO	Course Code	Course Name	CO No.	Course Outcomes	Taxonomy
1	5PC301EC	ELECTRONIC DEVICES	CO1	Understand the PN Diode V-I Characteristics and its applications.	Creating
			CO2	Identify the merits and demerits of various Rectifier circuits with Calculation of Ripple Factor and %Efficiency.	Understanding
			CO3	Discriminate the BJT Configurations to recognize appropriate Transistor Configuration for any given application.	Analyzing
			CO4	Design the the biasing circuits with good stability.	Understanding
			CO5	Analyze , Compare and design of BJT Amplifiers.	Remembering
			CO6	Distinguish the working principles of BJT and FET.	Remembering
2	5PC302EC	SIGNALS AND SYSTEMS	CO1	Differentiate various types of signals and systems in continuous and discrete time signals	Understanding
			CO2	Importance of frequency domain analysis and apply Fourier series for continuous time signals	Analyzing
			CO3	Apply the properties of Fourier transform for continuous time signals (TL:3)	Applying
			CO4	Relate Laplace transforms to solve differential equations and to determine the response of the CT- LTI Systems	Evaluating
			CO5	Apply Z-transforms for discrete time signals to solve Difference equations	Evaluating

			CO6	Determine Linear Convolution and Correlation of discrete time signals with graphical representation	Evaluating
3	5PC303EC	NETWORK THEORY	CO1	Identify different parameters for two-port networks	Understand
			CO2	Explain symmetrical and asymmetrical networks and their electrical properties	Create
			CO3	Design concepts of different filters	Create
			CO4	Design different Types of Attenuator and Equalizers	Remember
			CO5	Explain concepts of Network synthesis like Hurwitz polynomials, Positive real functions	Remember
			CO6	Analyse LC, RC,RL Networks by synthesis	Remember
4	5PC304EC	SWITCHING THEORY AND LOGIC DESIGN	CO1	Explain the basic concepts related to number system and their conversion.	Create
			CO2	Analyze the Boolean logic equations and simplify using K-map and tabular method .	Analyze
			CO3	Analyze the different combinational circuits and implement them using IC's.	Understand
			CO4	Explain the operation of flip flops and converting one flip flop to another.	Apply
			CO5	Analyze the concepts of sequential circuits.	Understand
			CO6	Design the counter using different IC's.	Create
5	5ES303EC	PROBABILITY THEORY AND STOCHASTIC PROCESSES	CO1	Explain definitions of Probability, Axioms, Joint Probability, Conditional Probability, Total Probability, Bayes' Theorem, Independent Events, Random Variable, Conditions of a Random Variable.	Understand
			CO2	Apply the concepts, theorems to derive probability distribution & probability density functions. Expectations, Moments & characteristic functions of Random variable	Apply

			CO3	Make use of Properties of distribution & density functions to solve Mean, Variance for - Binomial, Poisson, Uniform, Gaussian, Exponential, Rayleigh Distributions.	Apply
			CO4	Explain Multiple random variables i.e Joint density, Joint distribution, Central Limit Theorem, expected values of Multiple random variables.	Understand
			CO5	Explain concepts of Random process, and its properties. Variance, co variance, correlation & auto correlation. Power & cross power density spectrum and its properties.	Understand
			CO6	Examine different types of Noises and response to a random signal	Evaluating
6	5HS302HS	MANAGERIAL ECONOMICS AND FINANCIAL ACCOUNTING	CO1	Understand the financial and Accounting aspects of a business	Analyse
			CO2	Evaluate financial Performance of the business unit	Evaluate
			CO3	Understand about the financial system and markets	Evaluate
			CO4	Evaluate the viability of projects by using Capital budgeting Techniques.	Understand
			CO5	Analyse the overall financial functioning of an Enterprise	Evaluate
			CO6	Understand and take decision on procurement of finances.	Analyse
7	5MC303HS	INDIAN CONSTITUTION	CO1	Know the background of the present constitution of India.	Evaluate
			CO2	Understand the working of the union, state and local levels.	Evaluate
			CO3	Gain consciousness on the fundamentals rights and duties.	Understand
			CO4	Be able to understand the functioning and distribution of financial resources between the	Understand

				states	
			CO5	Be exposed to the reality of hierarchical Indian social structure and the ways the grievances deprived section can be addressed to raise human dignity in a democratic way.	Evaluate
			CO6	Be able to understand the functioning and distribution of financial resources between the centre and state.	Understand
8	5ES304EC	PYTHON PROGRAMMING	CO1	Explain basic principles of Python programming language.	Understand
			CO2	Create, run, and manipulate Python Programs using core data structures like Lists, Tuple, Set and Dictionaries.	Apply
			CO3	Understand and summarize different File handling operations.	Understand
			CO4	Handle exceptions in programming.	Apply
			CO5	Identify the commonly used operations involving file systems and regular expressions.	Understand
			CO6	Articulate the Object-Oriented Programming concepts such as encapsulation, inheritance and polymorphism as used in Python.	Apply
9	5PC351EC	ELECTRONIC DEVICES AND LOGIC DESIGN LAB	CO1	Understand characteristics of Diodes	Analyze
			CO2	Plot the characteristics of BJT in different configurations	Understand
			CO3	Record the parameters of BJT and FET amplifiers.	Creating
			CO4	Understand biasing techniques of BJT.	Remember
			CO5	Design and performance evaluation of full wave rectifiers	Understand
			CO6	Use the SPICE software for simulating electronic circuits	Evaluate
10	5PC352EC	NETWORK THEOREM LAB	CO1	Use the basic electronic components and design circuits.	Creating
			CO2	Verify various parameters of the circuits by applying theorems.	Analyzing
			CO3	Understand the making of PCB.	Applying
			CO4	Design various filters.	Evaluate

			CO5	Determine voltages and currents in a resonant circuit	Evaluate
			CO6	Determine network parameters for given two port network	Understand
11	5ES353CS	PYTHON PROGRAMMING LABORATORY	CO1	Write, Test and Debug Python Programs.	Create
			CO2	Implement Conditionals for Python Programs	Apply
			CO3	Implement Loops for Python Programs	Apply
			CO4	Use functions and represent Compound data using Lists, Tuples and Dictionaries	Apply
			CO5	Read and write data from & to files in Python and develop Application using Pygame	Apply

Dept Assessment Coordinator

Head of the Department



S.no	Course Code	Course Name	CO No.	Course Outcomes	Taxonomy
1	5PC405EC	ANALOG ELECTRONIC CIRCUITS	CO1	design and Analyze various amplifiers using BJT	Analyzing
			CO2	Analyze the frequency response of BJT	Analyzing
			CO3	Understand the concept of negative feedback and effect of negative feedback.	Understanding
			CO4	Design of different types of oscillators	Designing
			CO5	Design of power amplifiers and calculate their efficiencies.	Designing
2	5PC406EC	AUTOMATIC CONTROL SYSTEMS	CO1	Explain the concepts of control systems, time & frequency domain specification, and also concepts of state space representation.	Understanding
			CO2	Apply the concepts of networks, block diagram reduction rules, Mason's gain formula for computing the transfer function of control systems and transfer function of sample data systems.	Applying
			CO3	Analyze the modelling of mechanical systems and stability using time domain techniques.	Analyzing
			CO4	Analyze the control system stability using frequency domain techniques.	Analyzing
			CO5	Analyze the Discrete control systems and the control system in state space representation.	Analyzing
			CO1	Perform mathematical operations on fixed and floating point digital data.	Understanding

3	5PC407EC	COMPUTER ORGANISATION AND ARCHITECHTURE	CO2	Illustrate the operation of a digital computer.	Analyzing
			CO3	Understand I/O interfacing of a computer.	Analyzing
			CO4	Interface microprocessor with memory devices.	Applying
			CO5	Understand latest trends in microprocessors.	Evaluating
4	5PC408EC	ELECTROMAGNETIC THEORY AND TRANSMISSION LINES	CO1	Understand the different coordinate systems, concepts of electric, magnetic fields, Electromagnetic fields and transmission line parameters	Understanding
			CO2	Apply the principles of electrostatics to the solutions of problems relating to electric field and electric potential, boundary conditions and electric energy density.	Applying
			CO3	Apply the principles of magneto statics to the solutions of problems relating to magnetic field and magnetic potential, boundary conditions and magnetic energy density	Applying
			CO4	Analyze the EM wave propagation in different mediums and understand the concept of transmission lines & their applications.	Analyzing
			CO5	Analyze the SC,OC transmission lines and computing the impedance using smith chart.	Analyzing
5	5PC409EC	IC APPLICATIONS	CO1	Explain Differentiate IC and Discrete components, understand manufacturing process of IC and how monolithic components are being developed	Understanding
			CO2	Apply Learn about the basic concepts for the circuit configuration for the design of linear integrated circuits and & Develop skills to develop simple filter circuits and	Applying

				various amplifiers and can solve problems related to it	
			CO3	Analyze To study the block diagrams of 555 timer and 565 phase locked loops ICs and use them to construct various applications..	Analyzing
			CO4	Analyze the basic logic gates by using digital ic . Learn about various techniques to develop A/D and D/A convertors	Analyzing
			CO5	Analyze: The ability to understand, analyze and design various combinational and sequential circuits	Analyzing
6	5MC402HS	ESSENCE OF INDIAN TRADITIONAL KNOWLDEGE	CO1	To outline the history of civilization in Indian context since pre-Vedic times	Understanding
			CO2	To outline the various schools of Indian Philosophy	Understanding
			CO3	To demonstrate the diversity in Indian Thought , Languages , regional culture , dress, living style etc.	Understanding
			CO4	To Identify the various religious and social reform movements which took place in the past few centuries	Applying
			CO5	To classify the wealth of Indian Fine Arts and the diversity associated with it over the length and breadth of the country	Understanding
7	5HS403HS	HUMAN VALUES AND PROFESSIONAL ETHICS	CO1	Ensures students sustained happiness through identifying the essentials of human values	Understanding
			CO2	Ensures students sustained happiness thrugh identifying the essentials of professional ethics	Understanding and Analyzing
			CO3	It facilitates a correct understanding between profession and happiness	Understanding
			CO4	Understand practically the importance of trust, mutually satisfying human behaviour and enriching interaction with nature.	Understanding, evaluating
			CO5	Ability to develop appropriate technologies and management patterns to create harmony in professional and personal life.	Analyzing

8	5PC453EC	AEC LABORATORY	CO1	Calculate gain and bandwidth of BJT, FET.	Understanding
			CO2	Study Feedback amplifier circuits.	Remembering
			CO3	Study oscillator circuits.	Creating
			CO4	Demonstrate filter circuits.	Understanding
			CO5	Demonstrate power amplifier and OpAmp. Circuits	Understanding
9	5PC454EC	IC APPLICATIONS LABORATORY	CO1	Study and performance Of various parameters of op-amp & Construct linear and non-linear applications circuits .	Applying
			CO2	Design and Analyze different filters & their frequency comparision. (theoretical & practical)	Creating
			CO3	Design different multivibrators and their comparision. (theoretical & practical) by using IC 555	Analyzing
			CO4	Design sequential circuit synchronous & asynchronous counters	Applying
			CO5	Verify Flip-Flop conversions and latches using gates and ICs.	Applying

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V Semester

S.no	Course Code	Course Name	CO No.	Course Outcomes	Taxonomy
1	PC408EC	Digital Signal Processing	CO1	Identify the importance of DSP in real time processing	Applying
			CO2	Compute DFT & apply its properties in problem solutions , also optimize the calculation using FFT algorithm	Applying
			CO3	Design, evaluate& construct FIR filters to satisfy desired frequency response by hand	Creating
			CO4	Design,evaluate& construct IIR filters on the basis of an analogue design by hand	Creating
			CO5	Compute & comprehend sampling rate conversions & their applications	Evaluating
			CO6	Understand the importance of DSP processor applications and also comprehend thearchitecture, addressing modes & instruction set of TMS processor	Applying
2	PC409EC	Microprocessor and Microcontroller	CO1	Explain the generalized architecture of microprocessors and microcontrollers. Learn about 8086 Microprocessor and 8051 Microcontroller- different types of addressing modes, instruction set and interrupts.	Understanding
			CO2	Build Interfacing diagram of memory, peripherals using 8086 Microprocessor and 8051 Microcontroller.	Applying
			CO3	Apply 8086 Microprocessor and 8051 Microcontroller instruction set for writing simple assembly language programs.	Applying
			CO4	Explain the algorithm and program for interfacing different peripherals to 8086 microprocessor and 8051 Microcontroller.	Analyzing
			CO5	Write an Assembly/C language program for interfacing different peripherals by using different software tools to 8086 microprocessor and 8051 Microcontroller.	Evaluating

			CO6	Design Interfacing of real time applications like ADC, DAC, LCD and stepper motor with 8086 microprocessor and 8051 microcontroller.	Create
3	PC410EC	Analog Communication	CO1	Explain and analyze the various continuous modulation systems	Understanding
			CO2	Demonstrate and contrast the different Angle modulation schemes	Analyzing
			CO3	Illustrate and compare the pulse modulation systems	Applying
			CO4	Interpret with differentiate types of transmitters and receivers used for particular application.	Understanding
			CO5	Identify the noises present in continuous wave modulation systems and analyze Signal to Noise ratio in each system.	Analyzing
			CO6	Students able to Discriminate the design skills to illustrate the different modulation systems and method to implement different communication systems.	Applying
4	PC411EC	Automatic Control Systems	CO1	Students will be able understand fundamentals of control systems & able to apply the rules of block diagram and signal flow graph to obtain overall transfer function	Understanding/ Applying
			CO2	Students will be able to construct Routh Array/Hurwitz determinant and thus analyze system stability in time domain and time response	Applying and analyzing
			CO3	Students will be able to construct Root locus Technique and thus analyze system stability in time domain	Applying and analyzing
			CO4	Students will be able to construct Bode plots and thus analyze system stability in frequency domain	Applying and analyzing
			CO5	Students will be able to understand the digital control system and its importance	Understanding
			CO6	Students will be able to understand state space representation and hence determine stability, controllability and Observability of a system in state space domain	Determining
5	PC412EC	Antennas and wave	CO1	Illustrate the basic principles of antennas and learn the antenna terminology.	Understanding

		propagation	CO2	Design different types of wire antennas and make proficient in analytical skills for understanding practical antennas.	Applying
			CO3	Design different types of antennas for various frequency ranges and get updated with latest developments in the practical antennas.	Creating
			CO4	Apply the principles of antennas, to design antenna arrays and measure various parameters of antennas.	Analyzing
			CO5	Identify and understand the suitable modes of Radio Wave propagation used in current practice.	Evaluating
			CO6	Analyze the structure of atmosphere for the wave propagation	Analyzing
6	HS104ME	Industrial Administration and Financial Management	CO1	Illustrate the types of various business organizations, organization structures, functions of management and able to choose the proper plant layout.	Applying
			CO2	Explain the concept of Work Study and apply work measurement techniques for the calculation of standard time, and the concept of performance rating factors.	Applying
			CO3	Explain various concepts of Job evaluation, performance appraisal and wage payment system and able to apply these techniques.	Applying
			CO4	Demonstrate the concepts of Quality control, process control, material control and by use of control charts could evaluate whether the quality of a product or process in a plant.	Evaluating
			CO5	Demonstrate techniques like Linear Programming, Assignment and Project management & Material Management techniques and able to apply these techniques for optimum utilization of the resources.	Applying
			CO6	Illustrate the different terminology used in Financial Management and able to apply various capital budgeting techniques and break even analysis.	Applying
7	PC455EC	Microprocessor and Microcontroller Lab	CO1	Understand the architecture and its components of 8086 Microprocessor & 8051 Microcontrollers and develop algorithms for simple programs.	Understanding
			CO2	Apply the instruction set of 8086 Microprocessor & 8051 Microcontrollers and develop simple programs.	Applying

			CO3	Explain the usage of Branching, string instructions and Assembler Directives of 8086 Microprocessor for String Manipulations.	Applying
			CO4	Design and Develop interfacing applications by input/output, serial communication devices using 8086 Microprocessor	Evaluating
			CO5	Design algorithms and different programs for SFRs using C cross compilers for 8051 Microcontroller	Analyzing
			CO6	Design and Develop interfacing application by input/output ports, serial communication devices using C cross compilers for 8051 Microcontroller	Creating
8	PC456EC	Systems and Signal Processing Lab	CO1	Analyze and process signals in the discrete domain	Applying
			CO2	Perform linear and circular convolution on various types of signals	Applying
			CO3	Analyze and Observe Magnitude and phase characteristics (Frequency response Characteristics) of digital IIR-Butterworth, Chebyshev filters.	Analyzing
			CO4	Analyze and Observe Magnitude and phase characteristics (Frequency response Characteristics) of digital FIR filter using window techniques.	Analyzing
			CO5	Design multi rate signal processing of signals through systems.	Evaluating
			CO6	Develop and Implement DSP algorithms in software using a computer language such as C with TMS320C6713 floating point Processor	Evaluating
9	PW701EC	Mini Project	CO1	Get Practical experience of software design and development, and coding practices within Industrial/R&D Environments.	Understanding
			CO2	Gain working practices within Industrial/R&D Environments	Applying
			CO3	To encourage students to work on innovative and entrepreneurial ideas.	Understanding
			CO4	Prepare reports and deliver effective presentation.	Applying

			CO5	Demonstrate effective written and oral communication skills	Analyzing
			CO6	Design, implement and test the prototype/algorithm in order to solve the conceived problem.	Creating

Dept Assessment Coordinator

Head of the Department



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VI Semester

S.No.	Course Code	Course Name	CO No.	Course Outcomes	Taxonomy
1	PC413EC	Digital Communication	CO1	Explain the concepts of Receiver structure, Information theory, Codes for error control, Base band modulation schemes and Spread spectrum methods	Understanding
			CO2	Apply concepts of ISI and Eye Pattern for Base band digital data transmission., Information theory and assess information capacity of various channels	Applying
			CO3	Distinguish different types of Error control codes along with their encoding/decoding algorithms.	Analyzing
			CO4	Analyze the Performance of Baseband Modulation schemes based on Probability of error	Analyzing
			CO5	Analyze the performance of Spread Spectrum communication systems	Analyzing
2	PC414EC	VLSI Design	CO1	Understand various VLSI design styles, fabrication process of MOS, able to analyze the inverter characteristics, basic electrical properties and power dissipation of MOS transistor.	Analyzing
			CO2	Use Physical design rules to be followed for MOS designs, understand drawbacks of interconnects reliability issues and the effect of scaling on MOS devices.	Understanding

			CO3	Analyze and implement various MOS subsystems at gate level and transistor level.	Analyzing
			CO4	Analyze the operation of various arithmetic circuits and their testability.	Analyzing
			CO5	Design sequential logic circuits using MOS transistors.	Applying
3	PC415EC	Data Communication and Computer Networks	CO1	Understand the working of various network topologies in circuit and packet switching	Understanding
			CO2	Implement HDLC protocol and significance of MAC protocols	Applying
			CO3	Understand the network routing protocols and associated algorithms	Understanding
			CO4	Understand the transport layer working with TCP and UDP.	Understanding
			CO5	Implement network scenario and obtain its performance evaluation.	Applying
4	PE – I (PE501EC)	Digital Image and Video Processing	CO1	Develop a foundation that can be used as the basis for higher study and research in the image and video processing.	Remembering
			CO2	Design various filters for processing of images without destroying fine details like edges and lines.	Analyzing
			CO3	Apply image processing techniques for processing and analysis of remotely sensed, images.	Applying
			CO4	Understand the requirement for various image and video compression algorithms.	Understanding
			CO5	Understand and analyze the performance of block matching algorithms in video coding standards.	Understanding
5	PE – II (PE508EC)	IoT System Design and Applications	CO1	Explain the concept and significance of IoT and Web Technology.	Understanding
			CO2	Apply the industrial structure of M2M to IoT transition of sample data systems.	Applying
			CO3	Analyze the design and evaluate IoT architecture and its reference model.	Analyzing

			CO4	Analyze the applications of IoT in various industries, environment, agriculture, and health.	Analyzing
			CO5	Analyze the privacy, security, and governance issues related to IoT and suggest solutions to it.	Analyzing
6	OE – I (OE601CE)	Disaster Mitigation	CO1	Relate the terms and concepts related to disaster management.	Understanding
			CO2	Demonstrate the various categories of disasters and their specific characteristics.	Understanding
			CO3	Outline the emerging risks of disasters like climate change on urban areas.	Understanding
			CO4	Explain the pre-disaster, during disaster and post-disaster measures and framework.	Understanding
			CO5	Explain the disaster management acts and frameworks specific to India.	Understanding
7	PC458EC	Communication Systems Lab	CO1	Understand and simulate modulation and demodulation of AM and FM.	Applying
			CO2	Construct pre-emphasis and de-emphasis at the transmitter and receiver respectively.	Creating
			CO3	Understand and simulate the PAM, PWM&PPM circuits.	Applying
			CO4	Understand baseband transmission (i.e., PCM, DPCM, DM, and ADM) generation and detection.	Analyzing
			CO5	Understand and simulate digital modulation (i.e., ASK, FSK, BPSK) generation and detection.	Analyzing
8	PC459EC	Digital Integrated Circuits Lab	CO1	Write the Verilog HDL programs in gate level and data flow modeling.	Applying
			CO2	Implement combinational and sequential circuits using Verilog.	Creating
			CO3	Analyze digital circuits using VLSI CAD tools like Mentor Graphics / Cadence	Applying
			CO4	Design CMOS circuits like basic gates, adders at the transistor level	Analyzing
			CO5	Implement the layout of simple CMOS circuits like inverter and basic gates.	Analyzing
9	PC460EC	Data Communication and Computer	CO1	Understand the working of various network topologies and circuit and packet switching.	Applying

		Networks Lab	CO2	Comprehend the role of data link layers and significance of MAC protocols.	Creating
			CO3	Understand the networking protocols and the internet protocols.	Applying
			CO4	Understand the transport layer working with TCP, UDP and ATM protocols.	Analyzing
			CO5	Comprehend the functionality of application layer and the importance of network security.	Analyzing
10	PW701EC	Summer Internship	CO1	Students can Able to select a Practical problem and find solution by using current technologies	Understanding
			CO2	Student can go through training for implementing the project.	Applying
			CO3	Students can Able to design/develop a small and simple product in hardware or software.	Creating
			CO4	Students can Able to complete the task or realize a pre-specified target, with limited scope.	Creating
			CO5	Students can Able to learn to find alternate viable solutions for a given problem and evaluate these alternatives with reference to pre-specified criteria	Applying

Dept Assessment Coordinator

Head of the Department



Course Outcomes

AY: 2022-23 (AICTE Model Curriculum)

VII Semester

S.no	Course Code	Course Title	CO No.	Course Outcome	TAXONOMY
1	PC701 EC	EMBEDDED SYSTEM	CO1	Explain the basic concepts of embedded systems, the selection procedure of Processors, characteristics, and design process in the embedded domain.	Understanding
			CO2	Differentiate architectural features of advanced controllers, instruction sets for programming embedded system design. Apply architectural features of ARM processor for embedded products.	Applying
			CO3	Make use of serial, parallel bus protocols for developing of embedded system products. Also Apply network enabled protocols.	Applying
			CO4	Analyze testing and hardware software co- design issues pertaining to design of an Embedded System. Examine all software development tools for embedded system.	Analyzing
			CO5	Assess the goal of embedded systems in real time design applications. Know about the RTOS based embedded system design concepts. Compare Testing methods and Debugging techniques.	Evaluating
			CO6	Design and develop embedded product in real time design applications by applying steps in design process for hardware and software of embedded product.	Creating
2	PC702EC	VLSI DESIGN	CO1	Understand various VLSI design styles, fabrication process of MOS, able to analyze the inverter characteristics, basic electrical properties and power dissipation of MOS transistor.	Analyzing
			CO2	Use Physical design rules to be followed for MOS designs, understand drawbacks of interconnects reliability issues and the effect of scaling on MOS devices.	Understanding
			CO3	Analyze and implement various MOS subsystems at gate level and transistor level.	Analyzing
			CO4	Analyze the operation of various arithmetic circuits and their testability.	Analyzing
			CO5	Design sequential logic circuits using MOS transistors.	Applying
			CO6	Understand the small signal model and characteristics of CMOS amplifiers.	Understanding

3	PC703 EC	MICROWAVE TECHNIQUES	CO1	Describe the propagation characteristics of Guided waves in different modes	Understanding, Analyzing
			CO2	Evaluate different characteristics for Rectangular & Circular Waveguides & Cavity Resonators.	Applying, Analyzing
			CO3	Analyze microwave circuits using scattering parameters	Applying, Analyzing
			CO4	Design and analysis of microwave guides	Analyzing, Creating
			CO5	Understand the principle, operation and characteristics of microwave tubes and oscillators	Remembering, Analyzing
			CO6	Analyze the principle, operation and characteristics of microwave solid state devices including strip lines.	Analyzing, Evaluating
4	HS707ME	INDUSTRIAL ADMINISTRATION AND FINANCIAL MANAGEMENT	CO1	Illustrate the types of various business organizations, organization structures, functions of management and able to choose the proper plant layout.	Applying
			CO2	Explain the concept of Work Study and apply work measurement techniques for the calculation of standard time, and the concept of performance rating factors.	Applying
			CO3	Explain various concepts of Job evaluation, performance appraisal and wage payment system and able to apply these techniques.	Applying
			CO4	Demonstrate the concepts of Quality control, process control, material control and by use of control charts could evaluate whether the quality of a product or process in a plant.	Evaluating
			CO5	Demonstrate techniques like Linear Programming, Assignment and Project management & Material Management techniques and able to apply these techniques for optimum utilization of the resources.	Applying
			CO6	Illustrate the different terminology used in Financial Management and able to apply various capital budgeting techniques and break even analysis.	Applying
5	PE-II (PE721EC)	MOBILE AND CELLULAR COMMUNICATION	CO1	Understand the concept and implementation of frequency reuse and Handoff techniques	Understanding
			CO2	Analyze interference and capacity enhancement	Analyzing
			CO3	Appreciate the factors influencing outdoor and indoor propagation systems	Evaluating
			CO4	Analyze various multiple access protocols	Analyzing
			CO5	Visualize the system architectures and implementation of GSM and CDMA	Creating
			CO6	Understand the concepts in various Mobile Technologies	Understanding
6	OE-II (OE772CS)	Data Science Using R Programming	CO1	Apply linear algebra concepts such as distance, hyper planes, and eigen values in data science problems.	Applying
			CO2	Evaluate and interpret statistical models, including probability mass/density functions and hypothesis testing.	Analyzing

			CO3	Construct simple and multiple linear regression models for predictive modelling.	Creating
			CO4	Install and configure R software for programming in data science.	Applying
			CO5	Measure and evaluate the performance of classification models.	Evaluating
			CO6	Implement K-Nearest Neighbours (KNN) and K-Means algorithms in R for data classification and clustering.	Applying
7	OE-III (OE781CE)	ROAD SAFETY ENGINEERING	CO1	Demonstrate about road accidents and its study objectives. Prepare accident investigation reports and database based on data collected.	Understanding
			CO2	Apply design principles for roadway geometrics improvement with various types of traffic safety appurtenances/tools	Applying
			CO3	Explain the road safety design operations, counter measures & characteristics to manage traffic including incident management	Understanding
			CO4	Illustrate the concept of Road Safety Auditing its principles, procedures and code of good practice and checklists	Understanding
			CO5	Explain about design and working principles of road signs and traffic signals	Understanding
			CO6	Describe applications of ITS in effectively managing the traffic incidents.	Understanding
8	PC 751 EC	MICROWAVE LAB	CO1	Analyze frequency, Wave length, SWR and Impedance for Reflex klystron Oscillator by using its equation	Analyzing
			CO2	Evaluate of mode characteristics of Reflex klystron and V-I Characteristics of Gunn diode.	Evaluating
			CO3	Analyze of the characteristics of Circulator, Isolator, Directional Coupler, Tees like (Magic tee, E & H plane tees) using the Scattering parameters.	Analyzing
			CO4	To analyze the radiation pattern of antenna	Analyzing
			CO5	Generate the Radiation pattern of different antennas like Yagi-Uda and Horn Antenna and measure the gain of the antennas.	Analyzing
			CO6	Familiarize with the EM simulation software	Creating
9	PC 752 EC	ELECTRONIC DESIGN AUTOMATION LAB	CO1	Explain different architecture of ARM processor, its components and Concept of RTOS	Understanding
			CO2	Develop algorithms for simple programs based on RTOS using embedded C for ARM Processors	Analyzing
			CO3	Design and Develop interfacing Real Time applications using in out pins, serial communication devices for ARM processors	Creating
			CO4	Understand Layout design Rules	Understanding
			CO5	Developing the Verilog code for existing digital designs	Applying

			CO6	Design of Simple Gates using Layouts	Creating
10	PW 761 EC	PROJECT WORK-1	CO1	Decision making on interested topic and subject area in the wide spectrum of course	Analyzing
			CO2	Identify the applicability of modern software tools and technology	Analyze
			CO3	Deliver presentation based on the preparation	Creating
			CO4	Develop communication skills and stage performance	Creating
			CO5	Present the results from the work comprehensively through presentation.	Creating
			CO6	Correct him to improve presentation skills.	Evaluating

Dept Assessment Coordinator

Head of the Department



Course Outcomes

AY: 2022-23 (AICTE Model Curriculum)

VIII Semester

S.no	Course Code	Course Title	CO No.	Course Outcome	TAXONOMY
1	PE 824 EC	SATELLITE COMMUNICATIONS	CO1	Explain principle, working , operation of satellite.	Understanding
			CO2	Illustrate various effect on satellite communications and to understand types of antenna used.	Understanding
			CO3	Explain various components in satellite and satellite TV system.	Applying
			CO4	Analyze and design satellite communication link.	Applying
			CO5	Learn and design the application of satellite.	Analyzing
2	PE 832 EC	GLOBAL NAVIGATIONAL SATELLITE SYSTEMS	CO1	Explain the concepts of fundamentals & Segments of GPS and its error & different types of dilution of precision.	Understanding
			CO2	Describe the Global & Indian regional satellites system and its features.	Understanding
			CO3	Apply the concepts time references on satellite & Calculate different error's in GPS and can design the system in GPS and can design the system with improved accuracy.	Applying
			CO4	Analyze the GPS errors and their modelling techniques.	Analyzing
			CO5	Design Analyze the different types of GNSS Architectures	Designing
3	PE 843 EC	RADAR SYSTEMS	CO1	Demonstrate and understand the factors detecting the radar using radar range equation.	Understanding
			CO2	Illustrate various types of radars and their variation displays in radars	Analyzing
			CO3	Explain different types of MTI radars and Non coherent MTI radar	Analyzing
			CO4	Illustrate on radar tracking methods and differences among them.	Remembering
			CO5	Explain search radars and various antennas used in radars.	Understanding, Analyzing
4	PW 961 EC	PROJECT WORK-II	CO1	Prepare abstract for given project by identifying the requirements and prospective solution	Analyzing
			CO2	collect latest information related to the project from various sources to analyse the project	Analyzing
			CO3	design the necessary module of the selected project as per	Creating

				specifications	
			CO4	obtain and analyse the results of the designed module or circuit	Creating
			CO5	develop a prototype of the project by distribution of tasks among the team	Creating

Dept Assessment Coordinator

Head of the Department