SNO	Course Code	Course Name	CO No.	Course Outcomes	Taxonomy
1	MC111PC	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 conciousness on the fundamentals rights and duties.	Understanding
			CO4	Be able to understand the functioning and distribution of financial resources between the states	Understanding
			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	Understanding
2	HS201EG	EFFECTIVE TECHNICAL COMMUNICATION IN ENGLISH	CO1	Handle technical communication effectively	Evaluate
			CO2	Use different types of professional correspondence	Analyze
			CO3	Use various techniques of report writing	Understanding
			CO4	Acquire adequate skills of manual writing	Remember
			CO5	Enhance their skills of information transfer and presentations	Apply

			CO6	Understand the aspects of data transfer and presentations	Apply
3	HS202CM	FINANCE AND 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.	Analyze
4	BS205MT	MATHEMATICS-III	CO1	Find the general solutions of the given differential equations.	Analyze
			CO2	Solve the wave equation, heat equations and laplace equations of given problems	Evaluate
			CO3	Solve the desrete and continuos random variables and distibutions.	Analyze
			CO4	Examine the correlation coefficient and rank correlation for the given data.	Understand
			CO5	Determine straight line equation ,parabola equation and exponential equation.	Analyse
			CO6	Evaluate t-distibution F-distribution and chisquare distibutions.	Analyse
5	ES212ME	ELEMENTS OF MECHANICAL ENGINEERING	CO1	Understand the thermodynamics concepts to design thermal systems.	Understand
			CO2	Evaluate and compare the performances of prime movers like I.C engines, heat exchangers	Analyse

			CO3	Analyze the different modes of heat transfer i.econduction,convection and radiation,heat exchangers.	Create
			CO4	Analyze and understand the working of machines like lathe,milling,grinding,drilling machines	Understanding
			CO5	Evaluate the velocity ratio of gear drives,belt drives to design the gears and belt drives.	Applying
			CO6	Analyze the belt transmission system after evaluating its parameters like length of belt,power transmission ratio of tensions.	Understanding
6	ES216EC	DIGITAL ELECTRONICS	CO1	Explain the basic concepts related to number system and their conversion.	Creating
			CO2	Analyze the boolian logic equations and simplify using K-map and tabular method .	Analyzing
			CO3	Analyze the different combinational circuits and impliment them using IC's.	Understanding
			CO4	Explain the operation of flip flops and converting one flip flop to another.	Apply
			CO5	Analyze the cocepts of sequentional circuits .	Understand
			CO6	Design the counter using different IC's.	Create
7	PC221EC	ELECTRONIC DEVICES	CO1	Understand the PN Diode V-I Characteristics and its applications.	Create
			CO2	Identify the merits and demerits of varoius Rectifier circuits with Calculation of Ripplle Factor and %Efficiency.	Understand
			CO3	Discriminate the BJT Configurations to recognize appropriate Transistor Configuration for any given application.	Analyse
			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
8	PC222EC	NETWORK THEORY	CO1	Identify different parameters for two-port networks	Understanding
			CO2	Explain symmetrical and asymmetrical networks and their electrical properties	Creating
			CO3	Design concepts of different filters	Creating
			CO4	Design different Types of Attenuator and Equalizers	Remembering
			CO5	Explain concepts of Network synthesis likeHurwitz polynomials, Positive real functions	Remembering
			CO6	Analyse LC, RC,RL Networks by synthesis	Remembering
9	PC251EC	ELECTRONIC DEVICES LAB	CO1	Understand characteristics of Diodes	Analyzing
			CO2	Plot the characteristics of BJT in different configurations	Understanding
			CO3	Record the parameters of BJT and FET amplifiers.	Creating
			CO4	Understand biasing techniques of BJT.	Remembering
			CO5	Design and performance evaluation of full wave rectifiers	Understanding
			CO6	Use the SPICE software for simulating electronic circuits	Evaluating
10	PC252EC	ELECTRONIC WORKSHOP LAB	CO1	Use the basic electronic components and design circuits	Creating
			CO2	Verify various parameters of the circuits by applying theorems	Analyzing
			CO3	Verify the truth tables of combinational and sequential circuits	Applying

			CO4	Realize combinational and sequential circuits	Evaluate
			CO5	Understand the pin configuration of ICs and verify the operation of basic gates	Evaluate
			CO6	Design and verify the combinational and logic circuits	Understanding

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Methodist College of Engineering and Technology
Department of Electronics and Communication Engineering
Course
AY: 2019-20
Outcomes
IV Semester

S.no	Course Code	Course Name	CO No.	Course Outcomes	Taxonomy
1	MC112CE	ENVIRONMENTAL SCIENCE	CO1	Adopt environmental ethics to attain sustainable development.	Creating
			CO2	Develop an attitude of concern for the environment.	Creating
			CO3	Conservation of natural resources and biological diversity.	Applying
			CO4	Creating awareness of Green technologies for nation's security.	Creating
			CO5	Imparts awareness for environmental laws and regulations.	Evaluating
			CO6	create awareness and impart basic knowledge about the environment and its allied problems.	Creating
2	MC113PY	ESSENCE OF INDIAN TRADITIONAL KNOWLEDGE	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

			CO6	To List the various subjects which flourished in ancient system of education and the progression thereof to modern India.	Remembering
3	HS213MP	INDUSTRIAL PSYCOLOGY	CO1	Understanding of key concepts, theoretical perspectives, and trends in industrial psychology.	Understanding
			CO2	Evaluate the problems thorough and systematic competency model.	Evaluating
			CO3	Analyse the problems present in environment and design a job analysis method.	Analyzing
			CO4	Create a better work environment for better performance.	Creating
			CO5	Design a performance appraisal process and form for the human behavior.	Creating
			CO6	Design the counter using different IC's.	Understanding
4	BS206BZ	BIOLOGY FOR ENGINEERS	CO1	Apply biological engineering principles, procedures needed to solve real-world problems	Applying
			CO2	Understand the fundamentals of living things, their classification, cell structure and biochemical constituents.	Understanding
			CO3	Apply the concept of plant, animal and microbial systems and growth in real life situations	Applying
			CO4	Comprehend genetics and the immune system.	Analyzing
			CO5	Know the cause, symptoms, diagnosis and treatment of common diseases.	Remembering
			CO6	Apply basic knowledge of the applications of biological systems in relevant industries	Applying
			CO1	Differentiate various types of signals and systems in continuous and discrete time (TL:2)	Differentiating

5	ES215EC	SIGNALS AND SYSTEMS	CO2	Importance of frequency domain analysis and apply Fourier series for continuous time signals (TL:4)	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 (TL:5)	Evaluating
			CO6	Determine Linear Convolution and Correlation of discrete time signals with graphical representation	Evaluating
6	PC231EC	ANALOG ELECTRONIC CIRCUITS	CO1	Design and Analyse low , mid and high frequency response of small signal single and multistage BJT and FET amplifires	Create
			CO2	Identify the type of negative feedback, Analyse and design of negative feedback amplifiers.	Apply
			CO3	Design Audio Frequency and Radio Frequency Oscillators	Create
			CO4	Distinguish between the classes of Power Amplifiers and their design considerations	Evaluating
			CO5	Compare the performance of single and double tuned amplifiers	Understanding
			CO6	Overcome the problem of stability in RF amplifiers	Analyzing
			CO1	Understand the different coordinate systems, vector calculus, coulombs law and gauss law	Understanding

7	PC232EC	ELECTROMAGNETIC THEORY AND TRANSMISSION LINES	CO2	Explain about amperes law in magneto static fields and rewrite the Maxwell equations	Evaluating
			CO3	Distinguish the electromagnetic wave equations and study their characteristics propagated in different media	Understanding
			CO4	Analyze the reflection and refraction of electromagnetic waves propagated in normal and oblique incidences	Analyzing
			CO5	Describes the transmission lines with equivalent circuit and explain their characteristics with various lenghs.	Understanding
			CO6	Study the Smith Chart profile and stub matching features, and gain ability to practically use the same for solving practical problems	Remembering
8	PC233EC	PULSE LINEAR AND INTEGRATED CIRCUITS	CO1	Explain Linear and Non Linear wave shaping circuits, Analyse the response of linear wave shaping circuits to the different input signals	Understanding
			CO2	Analyse and design multivibrators and sweep circuits using transistors	Creating
			CO3	Explain the op amp ideal characteristics, parameters and its applications	Applying
			CO4	Analyse DC and AC characteristics for Single/Dual input Balanced/Unbalanced output configurations using BJTs	Analyzing
			CO5	Explain 555 timer functional diagram and its applications	Applying
			CO6	Analyse the operation of the most commonly used D/A and A/D converter types	Analyzing
			CO1	Perform mathematical operations on fixed and floating point digital data.	Understanding

9	PC234EC	COMPUTER ORGANISATION AND ARCHITECHTURE	CO2	Illustrate the operation of a digital computer.	Analyze
			CO3	Understand I/O interfacing of a computer.	Analyze
			CO4	Interface microprocessor with memory devices.	Apply
			CO5	Understand latest trends in microprocessors.	Evaluating
			CO6	Distinguish the organisation of various part of a system memory hierarchy	Creating
10	PC261EC	ANALOG ELECTRONICS AND CIRCUITS LAB	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
			CO6	Design of regulator circuits	Creating
11	PC232EC	PULSE AND LINEAR INTEGRATED CIRCUITS LAB	CO1	Design and Analyze Linear and Non Linear wave shapping circuits .	Creating
			CO2	Design Multivibrators by using BJT	Creating
			CO3	Study and performance of linear and non linear applications of op-amp	Remembering
			CO4	Study and performance of various parameters of op-amp	Remembering
			CO5	Design and Analyze different filters & their frequency comparision	Creating
			CO6	Design different multivibrators and their comparision. (theoritical & practical) by using IC 555	Creating

Dept Assessment Coordinator   Head of the Department

Methodist College of Engineering and Technology
Department of Electronics and Communication Engineering

Course Outcomes

S.no	Course Code	Course Name	CO No.	Course Outcomes	Taxonomy
1	PC501EC	Linear ICs and Applications	CO1	Explain the internal operation of Op-Amp and its specifications	Understand
			CO2	Analyze and design linear applications like adder, subs tractor, instrumentation amplifier and etc. using Op-Amp.	Analyze
			CO3	Classify various active filter configurations based on frequency response and construct using 741 OpAmp	Classify
			CO4	Operate 555 timers in different modes like bistable, monostable and astable operations and study their applications.	Operate
			CO5	Different techniques of A to D and D to A conversion techniques	Analyze
			CO6	Explain the internal operation of Voltage regulators by using IC and its specifications.	Understand
2	PC502EC	Analog Communication	CO1	Explain and analyze the various continuous modulation systems	Understand
			CO2	Demonstrate and contrast the different Angle modulation schemes	Analyze
			CO3	Illustrate and compare the pulse modulation systems	Apply
			CO4	Interpret with differentiate types of transmitters and receivers used for particular application.	Understand

			CO5	Identify the noises present in continuous wave modulation systems and analyze Signal to Noise ratio in each system.	Analyze
			CO6	Students able to Discriminate the design skills to illustrate the different modulation systems and method to implement different communication systems.	Apply
3	PC503EC	Digital Signal Processing	CO1	Identify the importance of DSP in real time processing	Apply
			CO2	Compute DFT & apply its properties in problem solutions , also optimize the calculation using FFT algorithm	Apply
			CO3	Design, evaluate& construct FIR filters to satisfy desired frequency response by hand	Create
			CO4	Design,evaluate& construct IIR filters on the basis of an analogue design by hand	Create
			CO5	Compute & comprehend sampling rate conversions & their applications	Evaluate
			CO6	Understand the importance of DSP processor applications and also comprehend thearchitecture, addressing modes & instruction set of TMS processor	Apply
4	PC504EC	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

				Students will be able to understand state space representation and hence determine stability, controllability and Observability of a system in state space domain	Determining
			CO6		
5	PC505EC	Computer Organization & Architecture	CO1	Explain Mathematical operations on Fixed point & Floating Point Digital Data and apply on digital arithmetic algorithms	Apply
			CO2	Illustrate the operation of a Digital Computer through Instruction Formats, Instruction Cycle , micro programmed control.	Analyze
			CO3	Explain Central processing unit of a computer Different instructions for Data Transfer and manipulation.	Understand
			CO4	Explain different types of Processing Techniques, CISC –RISC Processors and latest trends in Microprocessors	Classify
			CO5	Explain I/O Interfacing of a computer through different modes of transfer , Asynchronous data transfer, DMA and I/O Processor.	Understand
			CO6	Explain memory hierarchy, different types of memories used in computers and memory management	Differentiate
6	PC506EC	Digital System Design with Verilog HDL	CO1	Describe Verilog HDL and Write a verilog HDL code for the digital circuits in gate level and dataflow modelling	Understanding
			CO2	Develop a verilog HDL code for the digital circuits in switch level and behavioral modelling	Applying
			CO3	Analyze and synthesize synchronous sequential circuits and design the sequence detector using Moore and Mealy FSM	Analyzing
			CO4	Analyze the Asynchronous sequential circuits & describe the ASM chart for the digital circuits	Analyzing
			CO5	Explain SPLDS, CPLDs and Design various combinational circuits by using PLDs	Creating

				Design various circuits for memory devices and annotate the ASIC/FPGA design flow	Creating
7	MC901EG	Gender Sensitization	CO1	Develop a better understanding of important issues related to gender in contemporary India.	Understand
			CO2	To change the basic dimensions of the biological. Sociological, psychological and legal aspects of gender through discussions, facts, everyday life, literature and film	Apply
			CO3	To analyze how gender discrimination works in our society and how to counter it.	Analyze
			CO4	To identify and plan better ways of working and living together as equals.	Apply
			CO5	To develop a sense of appreciation of women in all walks of life	Evaluate
			CO6	To enable in developing good interpersonal relationships at work places and to develop a sustain interest in gender equality	Create
8	PC551EC	IC Applications lab	CO1	Study and performance 0f various parameters of op-amp & Construct linear and non-linear applications circuits .	Apply
			CO2	Design and Analyze different filters & their frequency comparision. (theoritical & practical)	Create
			CO3	Design different multivibrators and their comparision. (theoritical & practical) by using IC 555	Analyze
			CO4	Design sequential circuit synchronous & asynchronous counters	Apply
			CO5	Verify Flip-Flop conversions and latches using gates and ICs.	Apply
			CO6	Study Measurement of propagation delay, fan-out, Noise margin and transfer	Understand

				Characteristics of TTL and CMOS IC gates and open collector / drain gates.	
9	PC552EC	Systems and Signal Processing Lab	CO1	Analyze and process signals in the discrete domain	Apply
			CO2	Perform linear and circular convolution on various types of signals	COmpute
			CO3	Analyze and Observe Magnitude and phase characteristics (Frequency response Characteristics) of digital IIR-Butterworth, Chebyshev filters.	Analyze
			CO4	Analyze and Observe Magnitude and phase characteristics (Frequency response Characteristics) of digital FIR filter using window techniques.	Analyze
			CO5	Design multi rate signal processing of signals through systems.	Design
			CO6	Develop and Implement DSP algorithms in software using a computer language such as C with TMS320C6713 floating point Processor	Develop
10	PC553EC	Industrial Visit	CO1	It help students gain first hand information regarding functioning of the Industry	Understand
			CO2	Provides an opportunity to plan, organize and engage in active learning experiences both inside and outside the classroom	Apply
			CO3	Provides an insight into the real working environment of the Industry.Helps them to see their future place in the working world	Analyze
			CO4	This also serves as a relation building process between institutes and industry	Evaluate
			CO5	Helps to enhance their interpersonal skills and communications	Analyze
			CO6	Using the case study approach within the visit to bring out critical thinking among students	Create

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Course Outcomes

AY: 2019-20   **VI Semester**

S.No.	Course Code	Course Name	CO No.	Course Outcomes	Taxonomy
1	PC601EC	Digital Communication	CO1	Explain the concepts different types of digital modulation techniques PCM, DPCM, DM and ADM and compare their performance by SNR.	understanding
			CO2	Describe classification of channels and Source coding methods	Remembering
			CO3	Analyze the different types of Error control codes along with their encoding/decoding algorithms	Analyzing
			CO4	Analyze performance of different Digital Carrier Modulation schemes of Coherent and Non-coherent type based on Probability of error	Analyze
			CO5	Explain the base band modulation and matched filter concepts	understand
			CO6	Applying the generation of PN sequence using Spread Spectrum and characterize the Acquisition Schemes for Receivers to track the signals	Apply
2	PC602EC	Antennas and wave propagation	CO1	Illustrate the basic principles of antennas and learn the antenna terminology.	Understand
			CO2	Design different types of wire antennas and make proficient in analytical skills for understanding practical antennas.	Apply
			CO3	Design different types of antennas for various frequency ranges and get updated with latest developments in the practical	Create

				antennas.	
			CO4	Apply the principles of antennas, to design antenna arrays and measure various parameters of antennas.	Analyse
			CO5	Identify and understand the suitable modes of Radio Wave propagation used in current practice.	Evaluate
			CO6	Analyze the structure of atmosphere for the wave propagation	Analyse
3	PC603EC	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.	Understand
			CO2	Build Interfacing diagram of memory, peripherals using 8086 Microprocessor and 8051 Microcontroller.	Apply
			CO3	Apply 8086 Microprocessor and 8051 Microcontroller instruction set for writing simple assembly language programs.	Apply
			CO4	Explain the algorithm and program for interfacing different peripherals to 8086 microprocessor and 8051 Microcontroller.	Analyse
			CO5	Write an Assembly/C language program for interfacing different peripherals by using different software tools to 8086 microprocessor and 8051 Microcontroller.	Evaluate
			CO6	Design Interfacing of real time applications like ADC, DAC, LCD and stepper motor with 8086 microprocessor and 8051 microcontroller.	Create
4	HS604EC	Managerial Economics & Accountancy	CO1	Explain the responsibility of a manager and fundamental concepts of Managerial Economics.	Understanding
			CO2	Describe demand analysis and determinants of demand.	Understanding

			CO3	Analyse production & markets and compute the future sales level.	Analysing
			CO4	Explain the features, merits, uses & limitations of Pay back , ARR,NPV, PI & IRR methods of capital budgeting.	Understanding
			CO5	Explain the Principles of accounting and prepare Journal, Ledger, Trial balance, manufacturing	Understanding
			CO6	Analyse the analytical problems that arise in day to day decisions.	Analysing
5	PE – I (PE 672 EC)	Data Communication and computer networking	CO1	Understand the basic network infrastructure to learn the overall function of networking systems.	Understand
			CO2	Identify different tasks of computer communications networks and protocol architectures.Analyze and compare circuit switching and packet switching concepts.	Analysis
			CO3	Apply knowledge of different techniques of error detection and correction to detect and solve error bit during data transmissionand explain the MAC Protocols and IEEE standards.	Apply
			CO4	Compare various routing algorithm and select an appropriate one for a routing design and understand ATM network concepts.	Analysis
			CO5	Design a network routing for IP networks and Paraphrase the services & protocols of Transport layer.	Evaluate
			CO6	Comprehend the functionality of application layer and importance of network security	Understand
6	OE – I (OE601CE)	Disaster Management	CO1	**Evaluate** the environmental, social, cultural, economical, legal and organizational aspects influencing vulnerabilities and capacities to face	Evaluate

				disasters and to know different types of environmental hazards	
			CO2	**Examine** different types of natural and man- made disasters, theoretically and practically in the processes of disaster management and relate their interconnections.	Analyze
			CO3	**Interprete** endogenous and exogenous hazards and their harmful effects to the environment through case studies in India.	Understand
			CO4	**Organize** strategies for mitigation in future scenarios with available risk reduction techniques.	Applying
			CO5	**Demonstrate** different aspects of the emergencies and disaster events into the potential and limitations of science and its role in society and people's responsibility for how it is used.	Understand
			CO6	**Understanding** capacity building concepts and planning of disaster managements	Understanding
7	OE – I (OE602CS)	OOP using Java	CO1	Apply object oriented principles in s/w development process	Understanding
			CO2	Apply java program for real applications using java construct and libraries.	Create
			CO3	Understand and apply various object oriented features like class, object, data abstraction, encapsulation, inheritance, polymorphism to solve various computing problems using java language.	Applying
			CO4	Implement exception handling in java	Applying
			CO5	Use graphical user interface and event handling in java	Understanding
			CO6	Develop and deploy AWT, Swings in java	Applying

8	PC652EC	Microprocessor and Microcontroller Lab	CO1	Understand the architecture and its components of 8086 Microprocessor & 8051 Microcontrollers and develop algorithms for simple programs.	Understand
			CO2	Apply the instruction set of 8086 Microprocessor & 8051 Microcontrollers and develop simple programs.	Apply
			CO3	Explain the usage of Branching, string instructions and Assembler Directives of 8086 Microprocessor for String Manipulations.	Apply
			CO4	Design and Develop interfacing applications by input/output, serial communication devices using 8086 Microprocessor	Evaluate
			CO5	Design algorithms and different programs for SFRs using C cross compilers for 8051 Microcontroller	Analyse
			CO6	Design and Develop interfacing application by input/output ports, serial communication devices using C cross compilers for 8051 Microcontroller	Create
9	MC953 SP	Mandatory Course (Sports)	CO1	Students can develop an understanding in various sports and games	Create
			CO2	Students can create an environment ,this encourages the students to actively participate in various sports and games	Create
			CO3	Students can develop the spirit of sportsmanship & leadership qualities	Create
			CO4	Students can analyze the benifits of physical exercises to maintain a good physical and mental health .	Analyse
			CO5	Stuents can make use of sports for development of concentration	Apply
			CO6	Students can identify thier career in variuos sports and games	Apply

10	PC653EC	Summer Internship	CO1	Students can Able to select a Pratical problem and find solution by using current technologies	Understand
			CO2	Student can go through training for implementing the project	Apply
			CO3	Students can Able to design/develop a small and simple product in hardware or software.	Design
			CO4	Students can Able to complete the task or realize a pre-specified target, with limited scope	Design
			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	Apply
			CO6	Students can Able to implement the selected solution and document the same	Create
11	PC651EC	communication lab	CO1	Understand and simulate modulation and demodulation of AM and FM	Apply
			CO2	Construct pre-emphasis and de-emphasis at the transmitter and receiver respectively	Create
			CO3	Understand and simulate the PAM,PWM&PPM circuits	Apply
			CO4	Understand baseband transmission (i.e., PCM, DPCM, DM, and ADM) generation and detection	Analyse
			CO5	Understand and simulate digital modulation (i.e., ASK, FSK, BPSK,) generation and detection	Analyse
			CO6	Generation and Detection of PCM and Digital modulation Schemes (ASK. FSK, BPSK) by using MATLAB	Apply

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Methodist College of Engineering and Technology
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Course Outcomes

VII Semester

S.no	Course Code	Course Title	CO No.	Course Outcome	TAXONOMY
1	PC 701 EC	EMBEDDED SYSTEM	CO1	Explain the basic concepts of embedded systems, the selection procedure of Processors, characteristics, and design process in the embedded domain.	Understand
			CO2	Differentiate architectural features of advanced controllers, instruction sets for programming embedded system design. Apply architectural features of ARM processor for embedded products.	Apply
			CO3	Make use of serial, parallel bus protocols for developing of embedded system products. Also Apply network enabled protocols.	Apply
			CO4	Analyze testing and hardware software co- design issues pertaining to design of an Embedded System. Examine all software development tools for embedded system.	Analyse
			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.	Evaluate
			CO6	Design and develop embedded product in real time design applications by applying steps in design process for hardware and software of embedded product.	Create
2	PC 702 EC	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.	Analyze
			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.	Understand
			CO3	Analyze and implement various MOS subsystems at gate level and transistor level.	Analyze
			CO4	Analyze the operation of various arithmetic circuits and their testability.	Analyze
			CO5	Design sequential logic circuits using MOS transistors.	Apply
			CO6	Understand the small signal model and characteristics of CMOS amplifiers.	Understand
3	PC 703 EC	MICROWAVE	CO1	Describe the propagation characteristics of Guided waves in different modes	Understand, Analyze

		TECHNI QUES	CO2	Evaluate different characteristics for Rectangular & Circular Waveguides &Cavity Resonators.	Apply, Analyze
			CO3	Analyze microwave circuits using scattering parameters	Apply, Analyze
			CO4	Design and analysis of microwave guides	Analyze ,Create
			CO5	Understand the principle, operation and characteristics of microwave tubes and oscillators	Remember, Analyze
			CO6	Analyze the principle, operation and characteristics of microwave solid state devices including strip lines.	Analyze, Evaluate
4	HS 707 ME	INDUST RIAL ADMINIS TRATIO N AND FINANCI AL MANAG EMENT	CO1	Illustrate the types of various business organizations, organization structures, functions of management and able to choose the proper plant layout.	Apply
			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.	Apply
			CO3	Explain various concepts of Job evaluation, performance appraisal and wage payment system and able to apply these techniques.	Apply
			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.	Evaluate
			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.	Apply
			CO6	Illustrate the different terminology used in Financial Management and able to apply various capital budgeting techniques and break even analysis.	Apply
5	PE 721 EC	MOBILE AND CELLUL AR COMMU NICATIO N	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	Evaluate
			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 772 CS	OE-II DATA SCIENCE USING R- PROGRA MMING	CO1	Use various data structures and packages in R for data visualization and summarization	Analyzing
			CO2	Understand linear , non-linear regression models.	Understanding
			CO3	Exploring different packages for classification techniques for data analysis	Analyzing
			CO4	Generate different data models for statistical analysis	Creating
			CO5	Use clustering methods including K-means and CURE algorithm	Applying

			CO6	Explore R programming, Use various data structures and packages in R for data visualization and summarization	Understanding
7	OE 775 ME	OE-II ENTREP RENEUR SHIP	CO1	Explain Indian Industrial Environment, Entrepreneurship and Economic growth, Small and Large Scale Industries, Types and forms of enterprises.	Understanding
			CO2	Identify the characteristics of entrepreneurs, Emergence of first generation entrepreneurs, Understand and Practice the conception and evaluation of ideas and their source and choice of technology.	Applying
			CO3	Demonstrate the principles of project formulation, analysis of market demand, Financial and profitability analysis and Technical analysis and evaluate the technical feasibility and financial viability of a project.	Evaluate
			CO4	Apply the concepts of Project Management. CPM, PERT techniques and tax assessment burden	Applying
			CO5	Identify the Behavioral aspects of entrepreneurs, Leadership concepts and models, values and attitudes and motivation aspects.	Applying
			CO6	Apply Time Management principles	Applying
8	OE 781 CE	OE-III ROAD SAFETY ENGINE ERING	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
9	MC 771 EG	HUMAN VALUES AND PROFESS IONAL 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
			CO6	Understand the importance of ethical thinking in the environmental society.	Understanding

10	PC 751 EC	MICROW AVE LAB	CO1	Analyze frequency, Wave length, SWR and Impedance for Reflex klystron Oscillator by using its equation	Analyze
			CO2	Evaluate of mode characteristics of Reflex klystron and V-I Characteristics of Gunn diode.	Evaluate
			CO3	Analyze of the characteristics of Circulator, Isolator, Directional Coupler, Tees like (Magic tee, E & H plane tees) using the Scattering parameters.	Analyze
			CO4	To analyze the radiation pattern of antenna	Analyze
			CO5	Generate the Radiation pattern of different antennas like Yagi-Uda and Horn Antenna and measure the gain of the antennas.	Analyze
			CO6	Familiarize with the EM simulation software	Design
11	PC 752 EC	ELECTR ONIC DESIGN AUTOM ATION LAB	CO1	Explain different architecture of ARM processor, its components and Concept of RTOS	Understand
			CO2	Develop algorithms for simple programs based on RTOS using embedded C for ARM Processors	Analyze
			CO3	Design and Develop interfacing Real Time applications using input/output pins, serial communication devices for ARM processors	Create
			CO4	Understand Layout design Rules	Understand
			CO5	Develpoing the Verilog code for existing digital designs	Apply
			CO6	Design of Simple Gates using Layouts	Create
12	PW 761 EC	PROJECT SEMINA RS	CO1	Desicion making on intrested topic and subject area in the wide spectrum of course	Analyze
			CO2	Identify the applicability of modern software tools and technology	Analyze
			CO3	Deliver presentation based on the preparation	Create
			CO4	Develop communication skills and stage performance	Create
			CO5	Present the results from the work comprehensively through presentation.	Create
			CO6	Correct himself to improve presentation skills.	Evaluate
13	SI 762 EC	SUMME R INTERNS HIP	CO1	Students can Able to select a Pratical problem and find solution by using current technologies	Understand
			CO2	Student can go through training for implementing the project	Apply
			CO3	Students can Able to design/develop a small and simple product in hardware or software.	Design
			CO4	Students can Able to complete the task or realize a pre-specified target, with limited scope	Design
			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	Apply
			CO6	Students can Able to implement the selected solution and document the same	Create

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Department of Electronics and Communication Engineering

Course Outcomes

VIII Semester

S.no	Course Code	Course Title	CO No.	Course Outcome	TAXONOMY
1	PE 822 EC	INTERNET OF THINGS	CO1	Understand the various applications of IoT and other enabling technologies.	Understand
			CO2	Comprehend various protocols and communication technologies used in IoT	Evaluate
			CO3	Design simple IoT systems with requisite hardware and C programming software	Design
			CO4	Understand the relevance of cloud computing and data analytics to IoT	Understand
			CO5	Comprehend the business model of IoT from developing a prototype to launching a product	Evaluate
			CO6	Understand Ethical issues in IoT	Understand
2	PE 832 EC	GLOBAL NAVIGATIONAL SATELLITE SYSTEMS	CO1	Familiarize with the GNSS fundamentals and GPS architecture.	Understand
			CO2	Describe the different types of DOP"S	Applying
			CO3	Describe the different types of GNSS Signals and GNSS Datum.	Understand
			CO4	Analyse the GPS errors and their modelling techniques	Analyse
			CO5	Understanding various GPS data processing and GPS integration techniques	Understand
			CO6	Conceptualize the augmentation systems and regional navigation satellite systems.	Understand
3	PE 843 EC	RADAR SYSTEMS	CO1	Demonstrate and understand the factors detecting the radar using radar range equation	Understand
			CO2	Ilustrate various types of radars and their variation displays in radars	Understand
			CO3	Explain different types of MTI radars and Non coherent MTI radar	Understand
			CO4	Design radar systems to undertake measurements and verify the performance of radars	Design
			CO5	Design of radar antennas for various radar systems	Design
			CO6	Ilustrate and differentiating on various radar tracking methods of radar systems	Understand
4	PW 961 EC	PROJECT WORK	CO1	Prepare abstract for given project by identifying the requirements and prospective solution	Analyze
			CO2	collect latest information related to the project from various sources to analyse the project	Analyze

			CO3	design the necessary module of the selected project as per specifications	Create
			CO4	obtain and analyse the results of the designed module or circuit	Create
			CO5	develop a prototype of the project by distribution of tasks among the team	Create
			CO6	prepare a good report of the project as per the guidelines and present to the panel of experts	Evaluate

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