B.E. ELECTRONICS AND COMMUNICATION ENGINEERING
COURSE OUTCOMES

Course Name: HS8151 / Communicative English

CO No.	Course Outcomes (COs)
C101.1	Define the rules of English grammar and construct a paragraph.
C101.2	Interpret the process and describe the action used in Engineering.
C101.3	Extend the informal conversations.
C101.4	Outline an informal letter and email for official writing.
C101.5	Demonstrate the group discussion and face to face conversation for effective speaking.

Course Name: MA8151 Engineering Mathematics - I

CO No.	Course Outcomes (COs)
C102.1	Extend the limit definition and rules of differentiation to differentiate functions.
C102.2	Apply differentiation methods to solve maxima and minima problems.
C102.3	Explain the concept of definite and indefinite integrals.
C102.4	Apply integration to compute multiple integrals, area, volume, integrals in polar coordinates, in addition to change of order and change of variables.
C102.5	Apply the concept of differentiation in solving differential equation.

Course Name: PH8151 Engineering Physics

CO No.	Course Outcomes (COs)
C103.1	Interpret the basic properties of matter in I Shape girders, bending moment etc.
C103.2	Illustrate the concepts of waves and optical devices and their applications in fiber optics.
C103.3	Explain the thermal properties of materials in expansion joints and heat exchangers
C103.4	Summarize the advanced physics concepts of quantum theory and its applications in tunneling microscopes
C103.5	Outline the basics of crystal structures and different techniques to grow the crystals

Course Name: CY8151 Engineering Chemistry

CO No.	Course Outcomes (COs)
C104.1	Outline the requirements of boiler water, problems and treatment techniques.
C104.2	Explain the advantages of catalyst and adsorption on pollution abatement.
C104.3	Illustrate the basic concepts of phase rule in alloying and demonstrate the behavior of one and two component systems.
C104.4	Explain the types of fuels, manufacture of solid, liquid and gaseous fuels and calculations of calorific value.
C104.5	Summarize the various non-conventional energy sources and list the energy storage devices.

Course Name: GE8151Problem Solving and Python Programming

CO No.	Course Outcomes (COs)
C105.1	Develop algorithmic solutions to simple computational Problems.
C105.2	Construct Python Programs using Data, Expressions and Statements for solving problems.
C105.3	Apply the control flow and functions concepts in Python for solving problems.
C105.4	Make use of Lists, Tuples and Dictionary for solving problems.
C105.5	Make use of Files, Modules and Packages for solving problems.

Course Name: GE8152 Engineering Graphics

CO No.	Course Outcomes (COs)
C106.1	Illustrate about conics and orthographic views of engineering components.
C106.2	Show the projection of points, lines and planes.
C106.3	Construct the solids and projection of solids at different positions.
C106.4	Model the sectioned view of solids and development of surface.
C106.5	Develop the isometric projection and perspective views of an object/solid.

Course Name: GE8161Problem Solving and Python Programming Laboratory

CO No.	Course Outcomes (COs)
C107.1	Develop solutions to simple computational problems using Python programs.
C107.2	Make use of conditionals and loops in Python for solving problems.
C107.3	Develop Python programs by defining functions and calling them.
C107.4	Make use of compound data structures for solving problems.
C107.5	Develop Python programs using files.

Course Name: BS8161 Physics and Chemistry Laboratory

CO No.	Course Outcomes (COs)
C108.1	The students will have the ability to test materials by illustrate the physics principles in optics and properties of matter. Show the thickness of a thin wire using Air-wedge method.
C108.2	Show the velocity of ultrasonic waves in a given liquid medium and band gap of a semiconducting material.
C108.3	Estimate the hardness, chloride, alkalinity, Dissolved oxygen content of water samples. Estimate the amount of acid using conduct metric, pH metric method.
C108.4	Estimate the metal ion content in given sample by spectrophotometric, potentiometric and flame photometric method.
C108.5	Calculation of molecular weight of polyvinyl alcohol using Ostwald viscometer and estimate the CMC. Estimate rate of the reaction by Pseudo first order kinetics -ester hydrolysis. Calculate the weight loss of metal by Corrosion experiment.

Course Name: HS8251 Technical English

CO No.	Course Outcomes (COs)
C109.1	Interpret and recognize text transitions for comprehending the scientific and technical context.
C109.2	Illustrate the data from graphs and charts.
C109.3	Show proper vocabulary, correct spelling and grammar to create reports.
C109.4	Outline a formal cover letter along with a resume to email in a convincing manner.
C109.5	Demonstrate a formal and informal conversations to participate in group discussions for delivering effective technical presentations

Course Name: MA8251Engineering Mathematics - II

CO No.	Course Outcomes (COs)
C110.1	Extend the concept of eigen values and eigenvectors in diagonalization of a matrix, Symmetric matrices, and similar matrices.
C110.2	Compare the ideas of gradient, divergence and curl of a vector point function and related identities
C110.3	Interpret the view of line, surface and volume integrals using Gauss, Stokes and Green's theorems and their verification
C110.4	Summarize the purpose of analytic functions, conformal mapping and complex integration in Engineering field.
C110.5	Summarize the concepts of Laplace transform and inverse Laplace transform in application of differential equations with constant coefficients

Course Name: PH8253 Physics for Electronics Engineering

CO No.	Course Outcomes (COs)
C111.1	Summarize the classical and quantum electron theories and implement it in energy band structures.
C111.2	Classify the types of semiconductor and explain the principle behind Hall effect.
C111.3	Illustrate the properties of magnetic materials and its application in data storage devices and show the dielectric properties of materials.
C111.4	Outline the functioning of optical materials in the field of optoelectronics and optical data storage devices.
C111.5	Explain the basics of quantum structures and their applications in spintronics and carbon electronics.

Course Name: BE8254 Basic Electrical and Instrumentation Engineering

CO No.	Course Outcomes (COs)
C112.1	Outline the concept of three phase power circuits and measurement.
C112.2	Interpret the concepts of losses in transformer.
C112.3	Explain the construction and working principle of DC machines.
C112.4	Summarize the construction and working principle of AC machines.
C112.5	Outline the various measuring instruments for the given application.

Course Name: EC8251 Circuit Analysis

CO No.	Course Outcomes (COs)
C113.1	Interpret the basic concepts on network topology
C113.2	Illustrate network theorems for the analysis of AC and Dc circuit behavior.
C113.3	Apply circuit theorems for resonance and coupled circuits.
C113.4	Infer in steady state response of the circuit and its sinusoidal excitations
C113.5	Make use of network techniques for node analysis and loop analysis to write equations for large linear circuits.

Course Name: EC8252 Electronic Devices

CO No.	Course Outcomes (COs)
C114.1	Interpret the basic operation and characteristics of PN junction diode.
C114.2	Explain the operation and configurations of BJT.
C114.3	Explain the operation and characteristics of FET.
C114.4	Summarize the operation and applications of special semiconductor diodes.
C114.5	Outline the operation and applications of power devices and display devices.

Course Name: EC8261 Circuits and Devices Laboratory

CO No.	Course Outcomes (COs)
C115.1	Interpret the characteristics of PN junction diode and Zener diode.
C115.1	Construct the configurations of transistors.
C115.1	Illustrate the characteristics of FET and SCR.
C115.1	Experiment with Thevenin theorem, Norton theorem, KVL, KCL, super position theorem, maximum power transfer and reciprocity theorem
C115.1	Interpret the characteristics of Clipper, Clamper, RL and RC circuits.

Course Name: GE8261 Engineering Practices Laboratory

CO No.	Course Outcomes (COs)
C116.1	Model carpentry components and use welding equipment to join the structures
C116.2	Demonstrate Plumbing requirements of domestic buildings and machining
C116.3	Illustrate on basic machining operations, sheet metal works, centrifugal pump, Air conditioner, operations of smithy, foundary and fittings.
C116.4	Apply the concept of basic electrical engineering for house wiring practice and measurement of electrical quantities.
C116.5	Apply electronic principles to develop circuits for primitive applications

Course Name: MA8352 Linear Algebra and Partial Differential Equations

CO No.	Course Outcomes (COs)
C201.1	Explain the concepts of vector spaces and linear combinations.
C201.2	Illustrate the concept of linear transformation and diagonalization of matrix.
C201.3	Interpret the Inner product spaces in Gram Schmidt orthogonalization process.
C201.4	Explain the solutions given by standard differential equations.
C201.5	Apply the physical significance of Fourier series techniques in solving one and two dimensional heat flow problems and one dimensional wave equations

Course Name: EC8393 Fundamentals of Data Structures In C

CO No.	Course Outcomes (COs)
C202.1	Interpret the basics of C programming concepts.
C202.2	Apply functions and pointers to problem solutions.
C202.3	Utilize array and linked list to implement linear data structures.
C202.4	Apply Trees and Graphs to implement non-linear data structures.
C202.5	Analyze the various sorting, searching algorithms, and hashing techniques

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Course Name: EC8351 Electronic Circuits- I

CO No.	Course Outcomes (COs)
C203.1	Explain the working principles, characteristics and applications of BJT and FET.
C203.2	Apply the small signal analysis for the BJT amplifiers
C203.3	Apply the small signal analysis for the FET and MOSFET amplifiers
C203.4	Illustrate the high frequency response characteristics of large signal amplifiers
C203.5	Explain the working of different types of voltage regulators

Course Name: EC8352 Signals and Systems

CO No.	Course Outcomes (COs)
C204.1	Classify the types of signals & systems
C204.2	Apply Fourier series, Fourier transform and Laplace Transforms for continuous time signals
C204.3	Interpret Linear Time Invariant Continuous time system using Transforms
C204.4	Apply DTFT and Z transform for Discrete time signals
C204.5	Interpret Linear Time Invariant Discrete time system using Transforms

Course Name: EC8392 Digital Electronics

CO No.	Course Outcomes (COs)
C205.1	Illustrate the theorems and postulates of Boolean algebra and Karnaugh Map techniques.
C205.2	Develop the combinational digital circuits.
C205.3	Construct the synchronous sequential circuits, counters and shift registers.
C205.4	Construct the asynchronous sequential circuits.
C205.5	Outline the semiconductor memory devices.

Course Name: EC8391Control Systems Engineering

CO No.	Course Outcomes (COs)
C206.1	Choose the elements of control system and their modelling using various Techniques.
C206.2	Solve the various time domain parameters.
C206.3	Analyze the various frequency response plots and its system.
C206.4	Apply the concepts of various system stability criterions.
C206.5	Solve transfer functions using state variable models.

Course Name: EC8381 Fundamentals of Data Structures in C Laboratory

CO No.	Course Outcomes (COs)
C207.1	Develop C Programs for simple applications making use of basic constructs.
C207.2	Apply the concepts of functions and pointers to solve the computational problems.
C207.3	Make use of appropriate linear data structures in problem solving.
C207.4	Solve the computational problems using NonLinear Data Structures.
C207.5	Choose appropriate searching and sorting algorithms for an application and find solutions in a modularized way.

Course Name: EC8361 Analog and Digital Circuits Laboratory

CO No.	Course Outcomes (COs)
C208.1	Analyze the characteristic of different types of Amplifiers
C208.2	Analyze the limitation in bandwidth of single stage and multi stage amplifier
C208.3	Show the Simulation results of amplifiers using SPICE
C208.4	Construct the different types of combinational circuits
C208.5	Construct the different types of sequential circuits

Course Name: HS8381 / Interpersonal Skills/Listening &Speaking

CO No.	Course Outcomes (COs)
C209.1	Select the concept and respond appropriately.
C209.2	Show the speaking skill in Interview and group discussions
C209.3	Summarize the process and product
C209.4	Demonstrate effective presentation and use in communication
C209.5	Extend both formal and informal conversation.

Course Name: MA8451Probability and Random Processes

CO No.	Course Outcomes (COs)
C210.1	Relate the concepts of probability and standard distributions in real life phenomenon.
C210.2	Summarize the notions of co-variance, correlation and regression in communication engineering.
C210.3	Apply the concept of random processes in engineering disciplines.
C210.4	Utilize the idea of random process in correlation and spectral densities.
C210.5	Develop linear system with random inputs.

Course Name: EC8452 Electronic Circuits II

CO No.	Course Outcomes (COs)
C211.1	Illustrate the working of feedback amplifiers
C211.2	Construct the various types of LC and RC oscillators
C211.3	Interpret the functioning of tuned amplifiers
C211.4	Build the different types of wave shaping circuits and multivibrators
C211.5	Apply the principles of conduction angle to determine the efficiency of power amplifiers.

Course Name: EC8491 Communication Theory

CO No.	Course Outcomes (COs)
C212.1	Outline the concepts of various analog modulations and their spectral characteristics.
C212.2	Summarize the different types of analog communication systems and different modulation techniques.
C212.3	Apply the concept of probability, random variables & random process in the communication systems.
C212.4	Compare the noise performance of AM and FM systems
C212.5	Explain the concept of sampling and quantization in Phase, Frequency, Time modulation techniques.

Course Name: EC8451 Electromagnetic Fields

CO No.	Course Outcomes (COs)
C213.1	Explain the theorems associated with the fundamentals of electromagnetic fields using Vector calculus.
C213.2	Illustrate the behavior of static electric fields in standard configurations.
C213.3	Interpret the behavior of magnetic fields in standard configurations.
C213.4	Infer the Maxwell's equation in different forms (Differential & Integral) and its associated laws.
C213.5	Summarize the electromagnetic wave propagation in lossless and lossy media

Course Name: EC8453 Linear Integrated Circuits

CO No.	Course Outcomes (COs)
C214.1	Explain the basics of operational amplifiers
C214.2	Outline the applications of operational amplifiers
C214.3	Apply the applications using Analog Multiplier and PLL
C214.4	Interpret Analog to Digital and Digital to Analog convertors
C214.5	Illustrate waveform generators and special function ICs

Course Name: GE8291 Environmental Science and Engineering

CO No.	Course Outcomes (COs)
C215.1	Explain the concept of ecosystem, its values, and threats and outline the methods to conserve the biodiversity
C215.2	List the causes and effects of Environmental Pollution and provide technical solution for pollution control
C215.3	Interpret the types of natural resources available and measures to utilize them sustainably
C215.4	Identify the social issues in the environment and find solutions for the environmental Protection
C215.5	Outline the impact of population growth on environment and human health

Course Name: EC8461 Circuits Design and Simulation Laboratory

CO No.	Course Outcomes (COs)
C216.1	Analyze the various types of feedback amplifiers
C216.2	Analyze the various types of RC and LC oscillators
C216.3	Build the different types of tuned amplifiers
C216.4	Construct the different types of wave-shaping circuits and multivibrators
C216.5	Show the Simulation results of feedback amplifiers, oscillators, tuned amplifiers, wave-shaping circuits and multivibrators using SPICE Tool

Course Name: EC8462 Linear Integrated Circuits Laboratory

CO No.	Course Outcomes (COs)
C217.1	Illustrate the basics of linear integrated circuits
C217.2	Infer the concept of oscillators, active filters and amplifiers using OP AMP
C217.3	Infer the concept of multivibrators, Schmitt Trigger using OP AMP and NE 555.
C217.4	Make use of the working of D/A converters, DC power supply, PLL and use of PLL as Frequency Multiplier
C217.5	Experiment with the performance of A/D converters, active filters, analog multipliers and multivibrators using SPICE

Course Name: EC8501 Digital Communication

CO No.	Course Outcomes (COs)
C301.1	Interpret the basics on information theory.
C301.2	Outline the waveform coding for different modulation techniques.
C301.3	Infer the baseband transmissions and reception techniques.
C301.4	Classify the various band pass signaling schemes on Coherent BPSK, BFSK & QPSK.
C301.5	Solve error coding using error control techniques.

Course Name: EC8553 Discrete-Time Signal Processing

CO No.	Course Outcomes (COs)
C302.1	Apply the discrete Fourier transform and its properties for linear filtering
C302.2	Develop digital IIR filter for the given specifications
C302.3	Develop digital FIR filter for the given specifications
C302.4	Explain the effects of finite word length representation on digital filters
C302.5	Outline the functionalities and programming of Digital Signal Processors

Course Name: EC8552 Computer Architecture and Organization

CO No.	Course Outcomes (COs)
C303.1	Experiment with the data representation, instruction formats and the operation of a digital computer
C303.2	Implement the fixed point and floating-point arithmetic for ALU operation
C303.3	Experiment with the schemes of control unit and pipeline performance
C303.4	Apply the concept of various memories, interfacing and organization of multiple processors
C303.5	Organize parallel processing technique and unconventional architectures

Course Name: EC8551 Communication Networks

CO No.	Course Outcomes (COs)
C304.1	Outline the fundamental components required to build different types of networks.
C304.2	Explain the required functionality at network layer for given application.
C304.3	Summarize the flow of information in the various network routing protocols.
C304.4	Solve the solution of functionality at transport layer.
C304.5	Apply the different kinds of application layer protocols.

Course Name: EC8073 Medical Electronics

CO No.	Course Outcomes (COs)
C305.1	Outline the electro-physiology techniques and bio potential recording.
C305.2	Illustrate electrical, nonelectrical physiology parameters, recording and transmitting methods of these parameters.
C305.3	Classify different categories of assist devices used in hospitals.
C305.4	Apply the concept of diathermy and biotelemetry for surgical procedures and transmission of biological parameters
C305.5	Interpret the various recent trends in Medical Instrumentation

Course Name: OMD551 Basic of Biomedical Instrumentation

CO No.	Course Outcomes (COs)
C306.1	Explain the bio potential generation and types of electrodes.
C306.2	Summarize the different electrode placement for various physiological recording.
C306.3	Outline the bio amplifier for various physiological recording.
C306.4	Understand various technique non electrical physiogical measurements
C306.5	Classify the different types of biochemical measurements

Course Name: EC8562 Digital Signal Processing Laboratory

CO No.	Course Outcomes (COs)
C307.1	Analyze the generation of DT sequence, correlations, convolutions and DFT frequency analysis.
C307.2	Examine the implementation of various IIR and FIR filters.
C307.3	Analyze the generation of various signals and random noise.
C307.4	Examine the architecture and MAC operations of Digital Signal Processor.
C307.4	Analyze up-sampling and down-sampling operation in DSP Processor.

Course Name: EC8561 Communication Systems Laboratory

CO No.	Course Outcomes (COs)
C308.1	Make use of the sampling theorem to understand TDM operation.
C308.2	Illustrate base band signaling schemes through implementation of analog modulation schemes
C308.3	Summarize base band signaling schemes through implementation of Pulse modulation schemes
C308.4	Interpret base band signaling schemes through implementation of digital modulation schemes
C308.5	Apply various channel coding schemes for a given binary data and also establish end to end communication link

Course Name: EC8563 Communication Networks Laboratory

CO No.	Course Outcomes (COs)
C309.1	Demonstrate the Communication between two desktop computers.
C309.2	Classify the different protocols used in computer communication.
C309.3	Develop the IP address commands and Configurations.
C309.4	Compare and implement the various routing algorithms
C309.5	Develop the various simulation tools needed for control and encryption algorithms.

Course Name: EC8691 Microprocessors and Microcontrollers

CO No.	Course Outcomes (COs)
C310.1	Develop the assembly language programs based on 8086 Microprocessor.
C310.2	Outline the system bus timing and processor configurations.
C310.3	Build the interfacing of microprocessor with supporting chips.
C310.4	Develop the assembly language programs based on 8051 Microcontroller.
C310.5	Construct the Microcontroller based system.

Course Name: EC8095 VLSI Design

CO No.	Course Outcomes (COs)
C311.1	Explain the basics of Complementary Metal Oxide Semi-conductor circuits and Complementary Metal Oxide Semi-conductor process technology
C311.2	Intepret the working of various MOS combinational logic circuits
C311.3	Interpret the working of various MOS sequential logic circuits
C311.4	Construct the various arithmetic circuits and memory subsystems
C311.5	Illustrate the FPGA design flow and explain about the various testing mechanisms of VLSI circuits

Course Name: EC8652 Wireless Communication

CO No.	Course Outcomes (COs)
C312.1	Explain the concepts, mathematical models of a wireless channel and characteristics of fading in wireless channel.
C312.2	Apply the multiple access techniques, fundamental concepts of cellular architecture and its design considerations for given requirements.
C312.3	Identify the performance of digital modulation scheme for fading channels.
C312.4	Identify the performance of mitigation techniques to address fading and interference in multipath propagation.
C312.5	Apply the concepts of multiple input and multiple output (MIMO) to mitigate fading effect in wireless communication system.

Course Name: MG8591 Principles of Management

CO No.	Course Outcomes (COs)
C313.1	Explain the fundamentals of management skills.
C313.2	Outline the various planning tools and techniques
C313.3	Outline the various methods of organizing
C313.4	Explain the effective communication techniques for directing
C313.5	Outline the various process of controlling

Course Name: EC8651 Transmission Lines and RF Systems

CO No.	Course Outcomes (COs)
C314.1	Outline the various aspects of transmission line theory
C314.2	Infer the concepts of high frequency line, power and impedance measurements.
C314.3	Apply the transmission line theory to solve impedance matching using smith chart.
C314.4	Outline the various transmission methods in waveguides.
C314.5	Develop the RF transceiver for communication systems

Course Name: EC8004 Wireless Networks

CO No.	Course Outcomes (COs)
C315.1	Interpret the Wireless LAN technologies and its functions.
C315.2	Apply the concept of Mobile IP and Ad hoc Routing to find packet routing and efficiency
C315.3	Outline various latest 3G network technology with its architecture.
C315.4	Infer the requirements of internetworking and schemes to connect WLAN and WWAN
C315.5	Outline the various 4G technologies with its features

Course Name: EC8681 Microprocessors and Microcontrollers Laboratory

CO No.	Course Outcomes (COs)
C316.1	Construct the basic operations such as arithmetic and logical operations, data block movement, code conversion and string operations using 8086 microprocessor.
C316.2	Construct the various operations such as password checking, print RAM size and system date, counters and time delay using 8086 microprocessor.
C316.3	Build the interface of various peripheral chipsets with 8086 microprocessor.
C316.4	Construct the basic operations such as arithmetic and logical operations, 2's complement and code conversion and string operations using 8051 microcontroller.
C316.5	Construct the basic operations using MASM simulator.

Course Name: EC8661 VLSI Design Laboratory

CO No.	Course Outcomes (COs)
C317.1	Examine the FPGA implementation of adders, multipliers and ALU
C317.2	Examine the FPGA implementation of shift registers and memories
C317.3	Examine the FPGA implementation of Finite State Machines
C317.4	Analyze the simulation of CMOS inverter, basic gates and counters
C317.5	Analyze the CMOS inverter, Common Source, Common Drain, Common Gate amplifier and Differential amplifier using Tanner

Course Name: HS8381 Interpersonal Skills/Listening & Speaking

CO No.	Course Outcomes (COs)
C318.1	Demonstrate adequate Soft Skills which required for the workplace.
C318.2	Show the various technical presentations for interview skill
C318.3	Interpret in mock interview and interact in group discussions
C318.4	Outline professional etiquette
C318.5	Summarize the various technical conversation

Course Name: EC8701 Antennas and Microwave Engineering

CO No.	Course Outcomes (COs)
C401.1	Explain the basic principles of antennas and their parameters
C401.2	Apply the concept of radiation to find the field patterns of various antennas
C401.3	Illustrate the radiation characteristics of antenna arrays
C401.4	Outline the working of various passive and active microwave devices
C401.5	Build a microwave system using the given application specifications.

Course Name: EC8751 Optical Communication

CO No.	Course Outcomes (COs)
C402.1	Outline the basic elements and different modes of configuration in the optical fibers.
C402.2	Explain the transmission characteristics associated with dispersion and polarization techniques.
C402.3	Explain the basic operations of optical sources and detectors
C402.4	Outline the optic receiver systems, measurements and coupling techniques
C402.5	Construct the optical communication networks

Course Name: EC8791 Embedded and Real Time Systems

CO No.	Course Outcomes (COs)
C403.1	Explain the Embedded system design process &design examples.
C403.2	Outline the Concepts of ARM Architecture and Peripherals
C403.3	Explain about the Components of embedded programs and Program level performance
C403.4	Design the Structure of a Real Time System and Scheduling processes.
C403.5	Compare the generalpurpose operating system and real time system.

Course Name: EC8702 Ad hoc and Wireless Sensor Networks

CO No.	Course Outcomes (COs)
C404.1	Interpret the basics of Ad hoc networks and its Routing Protocols
C404.2	Outline the basics of wireless sensor networks and its architectures.
C404.3	Summarize the different MAC layer protocols.
C404.4	Explain the security issues in Ad hoc and sensor networks.
C404.5	Build basic modules of Wireless Sensor Networks.

Course Name: EC8071 Cognitive Radio

CO No.	Course Outcomes (COs)
C405.1	Summarize the types of disasters, causes and their impact on environment and society
C405.2	Illustrate the state and centre level action plan for the Disaster Risk Reduction
C405.3	Explain the inter-relationship between disasters and the developmental projects
C405.4	Demonstrate the disaster risk management systems being employed in India
C405.5	Infer the historic disaster events occurred in India.

Course Name: OCY751 Waste Water Treatment

CO No.	Course Outcomes (COs)
C406.1	Explain the importance of the water quality and the preliminary treatment process used in wastewater treatment.
C406.2	Summarize the basic concepts of industrial wastewater treatment
C406.3	Explain the role of conventional wastewater treatment processes
C406.4	Interpret the advancement in various wastewater treatment processes
C406.5	Classify the adsorption and oxidation process used in wastewater treatment

Course Name: EC8711 Embedded Laboratory

CO No.	Course Outcomes (COs)
C407.1	Develop C Programs in ARM for a specific application.
C407.2	Develop C Program to interface A/D and D/A Converter with ARM Processor.
C407.3	Apply the C program to interface memory and write programs related to memory operations.
C407.4	Analyze the performance of Interrupts.
C407.5	Develop C Programs to interface LCD/LED, Sensor and Motor.

Course Name: EC8761 Advanced Communication Laboratory

CO No.	Course Outcomes (COs)
C408.1	Analyze the working principle of optical sources, detector, fibers
C408.2	Construct simple optical communication link
C408.3	Examine the various characteristics of Wireless Communication System
C408.4	Inspect the VSWR and impedance measurement methods.
C408.5	Examine the various characteristics of Microwave devices.

Course Name: GE8076 Professional Ethics in Engineering

CO No.	Course Outcomes (COs)
C409.1	Explain the core values that shape the ethical behavior of an engineer.
C409.2	Interpret the basic perception of profession, professional ethics, various moral issues & uses of ethical theories.
C409.3	Explain the various social issues, industrial standards, code of ethics and role of professional ethics in engineering field.
C409.4	Identify the responsibilities of an engineer for safety and risk benefit analysis, professional rights and responsibilities of an engineer.
C409.5	Apply the concepts of various roles of engineers in variety of global issues and ethical principles to resolve situations that arise in their professional lives.

Course Name: EC8094 Satellite Communication

CO No.	Course Outcomes (COs)
C410.1	Outline the concepts of orbital mechanics and launch methodologies.
C410.2	Explain the Spacecraft Technology in Space Segment
C410.3	Solve the problems based on satellite uplink and downlink concepts.
C410.4	Explain the Modulation and Multiplexing of video, voice and multiple accesses techniques
C410.5	Summarize the different INTELSAT Series, Mobile satellite services and satellite application