Course Outcomes

Batch: 2024-28 **A.Y: 2024-25**

Course Outcomes (I Year- II Sem)		
S. No	**Course Outcomes Statement**	**Taxonomy**
Communicative English (23A0009T)		
C121.1	The learner will acquire the ability to understand the academic text from multiple dimensions employing ethical and logical reasoning based on accurate comprehension	Understand
C121.2	The learner will build strong vocabulary skills to enhance language skills	Apply
C121.3	The learner will be able to speak and write grammatically accurate sentences through applications of principles of English grammar.	Apply
C121.4	The learner will understand the potential of standard reading & listening strategies to grasp the core essence and spirit of the text.	Understand
C121.5	The learner will gain mastery on speaking & writing skills through the application of relevant guidelines, through consistent practice of functional English expression.	Apply
Chemistry (23A0004T)		
C122.1	Apply the basic principles of quantum theory and molecular orbital theory for Diatomic molecules to predict the structure	Apply
C122.2	Demonstrate the semiconductors, super conductors, super capacitors and nano materials.	Understand
C122.3	To impart knowledge on different types of batteries , potentiometry, conductometry and electrochemical sensors	Remember
C122.4	Understand the mechanism and applications of different polymers in electronic devices.	Understand
C122.5	Summarize the concepts of different Instrumental methods.	Understand
Differential Equations & Vector Calculus (23A0002T)		
C123.1	Solve the Various types of Ordinary Differential equations	Understand
C123.2	Solve the linear differential equations with constant coefficients by appropriate method.	Understand
C123.3	Apply a range of techniques to find solutions of standard partial differential equations	Apply
C123.4	Calculate gradient, divergence, curl of point functions and directional derivative of scalar point function.	Understand
C123.5	Apply Green's, Stokes and Divergence theorem in the evaluation of line, double and triple integrals.	Apply
Basic Civil & Mechanical Engineering (23A0101T)		
C124.1	Understand various sub-divisions of Civil Engineering and to appreciate their role in ensuring better society and basic characteristics of Civil Engineering Materials	Understand
C124.2	Know the concepts of surveying and to understand the measurement of distances, angles and levels through surveying.	Apply
C124.3	Realize the importance and the engineering measures related to Transportation and to Understand the importance of Water Storage and Conveyance Structures	Remember
C124.4	understand the properties of various engineering materials and their applications	Understand
C124.5	Understand the different manufacturing processes and explain the	Understand

	basics of thermal engineering and its applications	
C124.6	Describe the working of different mechanical power transmission systems and power plants, learn basics of robotics	Understand
Network Analysis (23A0205T)		
C125.1	Understand basic electrical circuits with nodal and mesh analysis.	Understand
C125.2	Apply network theorems to the complicated networks.	Apply
C125.3	Find Transient response and Steady state response of a network.	Apply
C125.4	Understand the fundamental concepts of coupled circuits	Understand
C125.5	Explain the electrical networks in the Laplace domain.	Understand
C125.6	Compute the parameters of a two-port network.	Apply
Engineering Workshop (23A0302P)		
C126.1	Apply wood working skills in real life applications	Apply
C126.2	Build different parts with metal sheets in real life applications	Apply
C126.3	Develop various fitting models in industrial applications	Apply
C126.4	Apply different types of basic electric circuit connections	Apply
C126.5	Demonstrating Joining operations like welding and Plumbing	Apply
	Develop various patterns in foundry in real life applications	Apply
Communicative English Lab (23A0010P)		
C127.1	Understand the English speech sounds, stress, and intonation for better Listening practice	Understand
C127.2	Apply communication skills through various language learning activities	Apply
C127.3	Application of writing skills through design and preparation of professional Resume & email writing.	Apply
C127.4	Construct Team Spirit by participating in team activities	Apply
C127.5	Prepare effective resonate and prepare themselves to face interviews and deliver Presentation in future.	Apply
Chemistry Lab (23A0007P)		
C128.1	Determine the cell constant and conductance of solutions and the strength of an acid by conductometry	Understand
C128.2	Synthesize of advanced polymer and nano materials	Remember
C128.3	Measure the strength of an acid present in secondary battery and Ferrous ion using volumetric analysis	Remember
C128.4	Identify the EMFs and pH of solutions using potentiometer and pH meter.	Apply
C128.5	Apply the principle of beer- lamberts law	Apply
Network Analysis Lab (23A0206P)		
C129.1	Verify Kirchoff's laws and network theorems.	Understand
C129.2	Measure time constants of RL & RC circuits.	Apply
C129.3	Analyze behavior of RLC circuit for different cases.	Analyse
C129.4	Determine the band width and Q-Factor for resonant circuit for given specifications.	Apply
C129.5	Study the Frequency response of first and second order circuits.	Understand
C129.6	Characterize and model the network in terms of all network parameters.	Apply

Course Outcomes

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Course Outcomes (II Year- II Sem)		
S. No	**Course Outcomes Statement**	**Taxonomy**
Managerial Economics & Financial Analysis (23A0022T)		
C221.1	Explain the role and responsibilities of a managerial economist in modern business scenario	Understand
C221.2	Apply the demand of a product by using demand forecasting methods.	Apply
C221.3	Calculate the Break Even Point (BEP) with the help of production and cost analysis.	Apply
C221.4	Explain their learnings about competitive markets and business economic environment.	Understand
C221.5	Apply the process of selection of investment alternatives using different appraisal methods.	Apply
C221.6	Examine the process of preparing financial statements to know financial position of the firm.	Analyse
Linear Control Systems (23A0217T)		
C222.1	Find the transfer function model for physical system and control system components	Apply
C222.2	Determine the transfer function for a given system using block diagram and signal flow graph methods	Apply
C222.3	Compute the time response of systems and steady state errors.	Apply
C222.4	Determine the absolute and relative stability of a system using RH and Root loci concepts	Analyse
C222.5	Analyse the stability of the system in Frequency domain and design compensation networks.	Analyse
C222.6	Describe the state variable representation of physical system and solve the state equation	Apply
EM Waves and Transmission Lines (23A0407T)		
C223.1	Learn the concepts of wave theory and its propagation through various mediums	Understand
C223.2	Understand the properties of transmission lines and their applications.	Understand
C223.3	Apply the laws & theorems of electrostatic fields to solve the related problems	Apply
C223.4	Gain proficiency in the analysis and application of magnetostatic laws and theorems	Analyse
C223.5	Analyze Maxwell's equations in different forms	Analyse
Electronic Circuits Analysis (23A0408T)		
C224.1	Understand the characteristics of Differential amplifiers, Feedback and Power Amplifiers	Understand
C224.2	Examine the frequency response of Multi stage and Differential amplifier circuits using BJT & MOSFET at low and high frequencies	Apply
C224.3	Investigate different feedback and Power Amplifier circuits based on the	Analyse

	application	
C224.4	Derive the expressions for frequency of oscillation and condition for oscillation of RC and LC Oscillator circuits	Analyse
C224.5	Evaluate the performance of different tuned amplifiers	Evaluate
C224.6	Design Analog circuits for the given specifications and applications	Create
Analog and Digital Communications (23A0409T)		
C225.1	Recognize the basic terminology used in analog and digital communication technique for transmission of information/data.	Understand
C225.2	Explain the basic operation of different analog communication systems at baseband and pass band level.	Understand
C225.3	Explain the basic operation of different digital communication systems at baseband and pass band level.	Understand
C225.4	Compute various parameters of baseband and pass band transmission schemes by applying basic engineering knowledge.	apply
C225.5	Analyze the performance of different modulation & demodulation techniques to solve complex problems in the presence of noise.	Analyze
C225.6	Evaluate the performance of all analog and digital modulation techniques to know the merits and demerits of each one of them in terms of bandwidth and power efficiency.	Evaluate
Electronic Circuits Analysis Lab (23A0410P)		
C226.1	Know about the usage of equipment/components/software tools used to conduct experiments in analog circuits.	Understand
C226.2	Conduct the experiment based on the knowledge acquired in the theory about various analog circuits using BJT/MOSFETs to find the important parameters of the circuit experimentally.	Apply
C226.3	Analyze the given analog circuit to find required important metrics of it theoretically.	Analyse
C226.4	Compare the experimental results with that of theoretical ones and infer the conclusions.	Analyse
C226.5	Design the circuit for the given specifications.	Evaluate
Analog and Digital Communications Lab (23A0411P)		
C227.1	Know about the usage of equipment/components/software tools used to conduct experiments in analog and digital modulation techniques.	Understand
C227.2	Conduct the experiment based on the knowledge acquired in the theory about modulation and demodulation schemes to find the important metrics of the communication system experimentally.	Apply
C227.3	Analyze the performance of a given modulation scheme to find the important metrics of the system theoretically.	Analyze
C227.4	Compare the experimental results with that of theoretical ones and infer the conclusions.	Analyze
Soft Skills (23A0026P)		
C228.1	Describe methods for building professional image.	Understand
C228.2	Apply critical thinking skills in problem solving.	Apply
C228.3	Analyze the needs of an individual and team for well-being.	Analyze
C228.4	Assess the situation and take necessary decisions.	Evaluate
C228.5	Create a productive work place atmosphere using social and work -life skills ensuring personal and emotional well -being.	Create

Design Thinking and Innovation (23A0413T)		
C229.1	Define the concepts related to design thinking.	Remember
C229.2	Explain the fundamentals of Design Thinking and innovation.	Understand
C229.3	Apply the design thinking techniques for solving problems in various sectors	Apply
C229.4	Analyse to work in a multidisciplinary environment.	Analyse
C229.5	Evaluate the value of creativity.	Evaluate
C229.6	Formulate specific problem statements of real time issues.	Create

Course Outcomes

Batch: 2022-26 **A.Y: 2024-25**

Course Outcomes (III Year- II Sem)		
S. No	**Course Outcomes Statement**	**Taxonomy**
Microprocessor and Microcontrollers (22A0434T)		
C321.1	Distinguish between microprocessors & microcontrollers	Remember
C321.2	Develop assembly language programming	Apply
C321.3	Describe interfacing of 8086 with peripheral devices	Apply
C321.4	Understand the concept of Microcontrollers	Understand
C321.5	Design applications using microcontrollers	create
C321.6	Design external Memory Interface using microcontroller.	create
Digital Signal Processing (22A0435T)		
C322.1	Understand the basic concepts of discrete-time signals and systems, classify systems based on their properties.	Understand
C322.2	Determine the frequency response for the given LTI systems using difference equations and also plot its pole-zero.	Apply
C322.3	Analyze discrete-time signals and systems using discrete time Fourier transform(DFT) and Fast Fourier transform(FFT).	Analyze
C322.4	Design and implement digital filters (FIR & IIR) for the given specifications.	Create
C322.5	Compare the digital filters and also realize the various filters for different structures in discrete-time systems.	Evaluate
C322.6	Understand and develop the sampling rate conversion techniques, find the quantization errors in digital signal processing.	Understand
VLSI Design (22A0436T)		
C323.1	Acquire qualitative knowledge about the fabrication process of integrated circuit using MOS	Understand
C323.2	Understand the concept of Basic Electrical Properties of MOS/Bi-CMOS Devices	Understand
C323.3	Apply the basic circuit concepts to MOS circuits.	Apply
C323.4	Apply the design Rules to draw the Stick diagram &layout of a given logic circuit.	Apply
C323.5	Design MOSFET based Analog IC Design and MOSFET based logic circuits using various logic styles like static and dynamic CMOS	create
C323.6	Understand the concept of testing and adding extra hardware to improve testability of system	Understand
Embedded System Design (22A0440T)		
C324.1	Explain the components of embedded systems	Understand
C324.2	Explain the core components and I/O components of embedded systems	Understand
C324.3	Explain the concepts of internal and external communication protocol	Understand
C324.4	Explain the embedded system firmware design development and for designing embedded software	Understand

C324.5	Learn the basics of OS and RTOS	Understand
C324.6	Illustrate different Inter Process Communication (IPC) mechanisms used by Task/Process to communicate multitasking environment.	Understand
Machine Learning (22A0528T)		
C325.1	Identify machine learning techniques suitable for a given problem	Remember
C325.2	Characterize the machine learning algorithms as supervised learning and unsupervised learning	Understand
C325.3	Solve the problems using various machine learning techniques	Apply
C325.4	Analyse the applications using machine learning techniques	Analyse
C325.5	Analyze and Apply the suitable supervised learning methods for real-world problems	Analyze
C325.6	Understand the features of machine learning to apply on real world problems	Understand
Microprocessor and Microcontroller Lab (22A0441P)		
C326.1	Interface the peripheral devices with 8086 microprocessors.	Analyse
C326.2	Interface the peripheral devices with 8051microcontrollers	Analyse
C326.3	Develop the algorithms using Assembly language.	Understand
C326.4	Develop programs using embedded C language for different applications.	Apply
C326.5	Develop the Assembly language programming approach for solving real world problems.	Understand
C326.6	Develop the Embedded C programming approach for solving real world problems.	Apply
Digital Signal Processing Lab (22A0442P)		
C327.1	Demonstrate DSP and its applications using MATLAB software	Understand
C327.2	Examine the frequency response of discrete-time LTI systems	Apply
C327.3	Design of IIR, FIR digital filters for the given specifications also observe the frequency response	Analyze
C327.4	To Learn the architecture details of floating point DSPs	Apply
C327.5	Implement DSP algorithms in software using CCS with DSP floating point Processor	Evaluate
C327.6	Analyze the basic signals and also find the discrete Fourier transform (DFT) for discrete-time signals/sequences	Understand
VLSI Design Lab (22A0443P)		
C328.1	Apply switching theory to the design logic theory problems.	Apply
C328.2	Design and simulate basic CMOS circuits like inverter, common source amplifier and differential amplifiers.	Understand
C328.3	Design and simulate combinational and sequential digital circuits.	Apply
C328.4	Design of various MOS differential amplifier	Understand
C328.5	Design and analysis of Common drain amplifier and Perform DC and AC analysis	Analyse
C328.6	Design of NAND/NOR Layout and Extract parasitic R and C in layout	Apply
JAVA Programming (22A0539)		
C329.1	Explain the basic concepts of OOP	Understand
C329.2	Explain about basic Constraints of C++ & Java	Understand
C329.3	Develop a program on operators in Java	Apply
C329.4	Apply Control statements to solve real time problems	Apply
C329.5	Analyze the concepts of constructers, overloading, Inheritance and	Analyse

	Interfaces in java	
C329.6	Implementing different types of Threads to solve real time problems	Apply
Research Methodology (22A0032M)		
C3210.1	To understand the basic concepts of research and research problem	Understand
C3210.2	To make the students learn about various types of data collection and sampling design	Understand
C3210.3	To enable them to know the method of statistical evaluation	Understand
C3210.4	To make the students understand various testing tools in research	Understand
C3210.5	To make the student learn how to write a research report	Understand
C3210.6	To create awareness on ethical issues n research	Understand

GEETHANJALI INSTITUTE OF SCIENCE & TECHNOLOGY

Department of Electronics and Communication Engineering

Course Outcomes

Batch: 2021-25 **A.Y: 2024-25**

Course Outcomes (IV Year- II Sem)		
S. No	**Course Outcomes Statement**	**Taxonomy**
Project (20A04801)		
C421.1	Identify the problem of social relevance to be solved.	Understand
C421.2	Summarize the existing technology, its merits and demerits used to solve the problem.	Analyze
C421.3	Design the appropriate solution using the sophisticated hardware or software.	Create
C421.4	Compare the results of the proposed solution with the existing solution.	Evaluate
C421.5	Demonstrate the project along with the complete documentation report of the project.	Evaluate
C421.6	Show the interpersonal, professional and work with team skills.	Apply