GEETHANJALI INSTITUTE OF SCIENCE & TECHNOLOGY::NELLORE
Department of Electronics and Communication Engineering

Course Outcomes

SNO	Course Outcomes Statement	Taxonomy
SPECIFIC LEARNING OUTCOMES - LINEAR ALGEBRA AND CALCULUS		
C111.1	Solve linear system of equations and calculate the Eigen values and Eigen vectors of the given square matrices.	Apply
C111.2	Apply Cayley – Hamilton theorem to find the inverse and powers of a square matrix and diagonalise the square matrix.	Apply
C111.3	Analyze mean value theorems to the given function.	Analyze
C111.4	Utilize the technique of partial differentiation to find the Jacobian and the extreme values of functions of several variables.	Apply
C111.5	Apply the techniques of multiple integrals to find the areas and volumes.	Apply
C111.6	Calculate the values of improper integrals using Beta and Gamma functions.	Apply
SPECIFIC LEARNING OUTCOMES – APPLIED PHYSICS		
C112.1	Describe the importance of Interference, Diffraction and Polarization and the engineering applications as well	Understand
C112.2	Demonstrate the properties of lasers and fibre optics to various applications in science and technology	Apply
C112.3	Explain the dielectric and magnetic materials and applications in emerging micro device	Understand
C112.4	Explain the concept of quantum mechanics using electron theories in solids	Understand
C112.5	Illustrate the functioning of semiconductors in electronic devices	Apply
C112.6	Discuss the principles and theory related to superconductors and explore their technological applications	Understand
SPECIFIC LEARNING OUTCOMES – COMMUNICATIVE ENGLISH		
C113.1	Interpret basic grammatical concepts for better understanding of sentence structure in English language.	Understand
C113.2	Interpret pieces of specific information from social or transactional dialogues spoken by native speakers of English to improve comprehension abilities among students	Understand
C113.3	Use grammatical structures to construct sentences and correct word formation	Apply
C113.4	Illustrate discourse markers to make students use them in both formal and informal discussions	Apply
C113.5	Evaluate reading/listening skills of students through academic texts and enhance them to write summaries based on global comprehension of these texts.	Evaluate

C113.6	Develop better speaking skills among students through participation in structured talks/oral presentations.	Create
SPECIFIC LEARNING OUTCOMES – FUNDAMENTALS OF ELECTRICAL CIRCUITS		
C114.1	Explain types of networks and Network Reduction Techniques	Understand
C114.2	Analyze Magnetic Circuits and Coupled circuits.	Analyse
C114.3	Analyze RLC circuits with AC Excitation	Analyse
C114.4	Apply theorems for finding the solutions of network problems	Analyse
C114.5	Analyse three phase balanced and unbalanced circuits and determine line voltages, line currents, phase voltages and phase currents	Analyse
C114.6	Analysis of electrical networks using graph theory and duality and dual networks	Analyse
SPECIFIC LEARNING OUTCOMES – ENGINEERING DRAWING		
C115.1	Discuss the Principles of Engineering Graphics and sketch the various Curves used in Engineering Practice	Apply
C115.2	Sketch the projections of points and lines	Apply
C115.3	Sketch the projection of solids	Apply
C115.4	Sketch the Section planes and sectional view of right regular solids	Apply
C115.5	Draw the development of regular solids such as prism, cylinder, pyramid and cone	Apply
C115.6	Sketch the development of sectional parts of regular shapes	Apply
SPECIFIC LEARNING OUTCOMES –ENGINEERING GRAPHICS LAB		
C116.1	Draw the various curves applied in engineering	Understand
C116.2	Show projections of solids and sections graphically	Understand
C116.3	Draw the development of surfaces of solids	Apply
C116.4	Use computers as a drafting tool	Understand
C116.5	Draw isometric drawings using CAD package	Apply
C116.6	Draw orthographic drawings using CAD package	Apply
SPECIFIC LEARNING OUTCOMES – APPLIED PHYSICS LAB		
C117.1	Determine the radius of a curvature and / or thickness of thin wire using microscope with the help of interference concept	Apply
C117.2	Evaluate the wavelength of various colors of grating and also dispersive power of prism by spectrometer using the principle of diffraction	Evaluate
C117.3	Evaluate wavelength of light source and particle size with He-Ne laser using the principle of diffraction Estimate the numerical aperture of a given optical fiber and hence to find its acceptance angle	Evaluate
C117.4	Estimate the dielectric constant of a given material	Evaluate
C117.5	Examine the hysteresis loss of the magnetic material by B- H curve and Estimate the magnetic field of a circular coil carrying current	Evaluate

	along the axis	
C117.6	Measure the type of conductivity ,hall voltage and hall coefficient of a given semiconductor using hall effect and also measure the energy band gap of a given semiconductor material	Evaluate
SPECIFIC LEARNING OUTCOMES- COMMUNICATIVE ENGLISH LAB		
C118.1	Differentiate various accents spoken by native speakers of English.	Understand
C118.2	Apply suitable reading strategies for comprehension of texts on monitor to get general idea and locate specific information.	Apply
C118.3	Compose talks extemporarily by practicing talks on general topics.	Create
C118.4	Build efficient Written communication skills by practicing E-mail writing and Resume writing.	Create
C118.5	Build the ability of using language effectively to face interviews, group discussions, public speaking	Create
C118.6	Evaluate and exhibit acceptable etiquette essential in social and professional settings	Evaluate
SPECIFIC LEARNING OUTCOMES- FUNDAMENTALS OF ELECTRICAL CIRCUITS LAB		
C119.1	Explain network elements and types of networks	Apply
C119.2	Apply theorems for finding the solutions of network problems	Apply
C119.3	Apply Maximum power transfer theorems for finding the solutions of DC & AC Networks	Apply
C119.4	Analyze RLC circuits and coupled circuits.	Analyse
C119.5	Understand 3 phase balanced and unbalanced, star and delta connected supply and load	Understand
C119.6	Measure reactive power in 3-phase circuit using different methods	Apply
SNO	**Course Outcomes Statement**	**Taxonomy**
SPECIFIC LEARNING OUTCOMES - Linear Algebra and Calculus		
C111.1	Solve linear system of equations and calculate the Eigen values and Eigen vectors of the given square matrices.	Apply
C111.2	Apply Cayley – Hamilton theorem to find the inverse and powers of a square matrix and diagonalise the square matrix.	Apply
C111.3	Analyze mean value theorems to the given function.	Analyze
C111.4	Utilize the technique of partial differentiation to find the Jacobean and the extreme values of functions of several variables.	Apply
C111.5	Apply the techniques of multiple integrals to find the areas and volumes.	Apply
C111.6	Calculate the values of improper integrals using Beta and Gamma functions.	Apply
SPECIFIC LEARNING OUTCOMES – Chemistry		
C112.1	Describe Planck's quantum theory, dual nature of matter, Schrodinger equation, molecular orbital Theory and molecular orbital energy level diagram of different molecules	Understand
C112.2	Explain Crystal field theory, splitting in octahedral and tetrahedral geometry and the magnetic behaviour, Oxidation state, coordination and colour of complexes.	Understand

C112.3	Apply the principle of Band diagrams of conductors, superconductor, semiconductors and insulator and nonmaterial	Apply
C112.4	Discuss the principles of electrochemistry in potentiometry, conductometry, battery and electrochemical sensors	Understand
C112.5	Explain polymerization and the preparation, properties, and applications of thermoplastics &thermosetting, elastomers, & conducting polymers	Understand
C112.6	Discuss the different applications of analytical instruments	Understand
SPECIFIC LEARNING OUTCOMES – C-Programming & Data Structures		
C113.1	Analyze the basic concepts of C programming language.	Analyze
C113.2	Design applications in C programs using functions, arrays, strings, pointers and structures	Create
C113.3	Apply the concepts of Stacks and Queues in solving real-world problems	Apply
C113.4	Interpret the concept of Linked Lists and explore various operations on Linked lists	Analyze
C113.5	Analyze the concept of trees and graphs.	Analyze
C113.6	Design searching and sorting methods.	Create
SPECIFIC LEARNING OUTCOMES – Basic Electrical & Electronics Engineering		
C114.1	Analyze simple electrical circuits with DC excitation, Network theorems and simple AC circuits consists of RL,RC and RLC elements	Analyze
C114.2	Explain principle and operation of DC Generator, DC motor, Transformer and Induction motor	Understand
C114.3	Understand about electrical power generation, transmission and distribution	Understand
C114.4	Interpret the characteristics of special purpose diodes and its applications	Understand
C114.5	Describe the operation of operational amplifiers and its applications	Understand
C114.6	Analyze the standard combinational ,sequential circuits and micro controllers	Analyze
SPECIFIC LEARNING OUTCOMES – Engineering Workshop		
C115.1	Apply wood working skills in real world applications.	Apply
C115.2	Build different parts with metal sheets in real world applications.	Apply
C115.3	Apply fitting operations in various applications.	Apply
C115.4	Apply different types of basic electric circuit connections.	Apply
C115.5	Demonstrate soldering and brazing.	Apply
C115.6	Repair the punctured tire of bicycle.	Apply
SPECIFIC LEARNING OUTCOMES – IT Workshop		
C116.1	Disassemble and Assemble a Personal Computer and prepare the computer ready to use.	Apply
C116.2	Install different operating systems in a computer and utilize the features of operating system.	Apply
C116.3	Prepare the Documents using Word processors and LAteX, Prepare spread sheets for calculations using excel and prepare Slide presentations using presentation tool.	Create

C116.4	Install Antivirus software in a computer and use it to check for threats to the computer.	Apply
C116.5	Interconnect two or more computers for information sharing.	Apply
C116.6	Access the Internet and Browse it to obtain the required information.	Apply
SPECIFIC LEARNING OUTCOMES – Chemistry Lab		
C117.1	Determine the cell constant and conductance of solutions and the strength of an acid by conductometry	Apply
C117.2	Synthesize of advanced polymer materials	Create
C117.3	Measure the strength of an acid present in secondary battery and Ferrous ion using volumetric analysis	Evaluate
C117.4	Determine the potentials and EMFs of solutions by Potentiometry	Apply
C117.5	Identify some organic and inorganic compounds by instrumental methods	Remember
C117.6	Synthesize of nanomaterials by simple methods	Create
SPECIFIC LEARNING OUTCOMES- C-Programming & Data Structures Lab		
C118.1	Demonstrate the basic concepts of C programming language.	Create
C118.2	Develop C programs using functions, arrays, strings, structures and pointers.	Create
C118.3	Illustrate the concepts of Stacks and Queues and apply them.	Create
C118.4	Design operations on Linked lists.	Create
C118.5	Analyze the concept of trees and apply various Binary tree traversal techniques.	Apply
C118.6	Develop searching and sorting methods.	Create
SPECIFIC LEARNING OUTCOMES- Basic Electrical & Electronics Engineering Lab		
C119.1	Test the concept of circuit laws and network theorems	Evaluate
C119.2	Determine the characteristic of DC generator and DC Motor also speed control of DC Motor.	Apply
C119.3	Analyze the characteristics of solar panel, transformer and induction motor	Analyze
C119.4	Recognize the characteristics of special purpose diodes and BJT's	Understand
C119.5	Analyze the characteristics of wave shaping circuits and amplifiers using op - amps	Analyze
C119.6	Experiment the truth tables of logic gates and flip-flops	Apply