



## GEETHANJALI INSTITUTE OF SCIENCE & TECHNOLOGY::NELLORE

Department of Computer Science and Engineering

### Course Outcomes

SNO	Course Outcomes Statement	Taxonomy
<b>SPECIFIC LEARNING OUTCOMES -BASIC ELECTRICAL AND ELECTRONICS ENGINEERING</b>		
C121.1	Analyse simple electrical circuits with DC excitation, Network theorems and simple AC circuits consists of RL,RC and RLC elements	Analyse
C121.2	Explain principle and operation of DC Generator, DC motor, Transformer and Induction motor	Understand
C121.3	Understand about electrical power generation, transmission and distribution	Understand
C121.4	Describe the operation and applications of PN junction diode & zener diode, BJT, FET, MOSFET and operational amplifier	Remember
C121.5	Explain fundamentals of digital electronics and combinational circuits such as adders, multiplexers and decoders functionality of flip-flops, shift registers and counters	Understand
C121.6	Explain need for modulation, different modulation techniques and functioning of Microwave & Satellite, Fiber optic, Television, mobile communication systems	Understand
<b>SPECIFIC LEARNING OUTCOMES – PROBABILITY AND STATISTICS</b>		
C122.1	Define the basic concepts of data science and its importance in engineering.	Remember
C122.2	Analyze the correlation methods and principles of least squares, regression analysis.	Analyze
C122.3	Apply the basic concepts of probability, conditional probability and Baye's theorem to real time problems.	Apply
C122.4	Apply the Binomial, Poisson and Normal distribution to compute probabilities.	Apply
C122.5	Analyze the problems of large samples using the techniques of testing of hypothesis.	Analyze
C122.6	Apply the techniques of testing of significance for small samples.	Apply
<b>SPECIFIC LEARNING OUTCOMES –APPLIED PHYSICS</b>		
C123.1	Describe the importance of Interference, Diffraction and Polarization and the engineering applications as well	Understand
C123.2	Explain the dielectric and magnetic materials and applications in emerging micro device	Understand
C123.3	Demonstrate the electromagnetic wave propagation and optical fibers	Apply

	in various medical and communication fields	
C123.4	Illustrate the functioning of semiconductors in electronic devices	Apply
C123.5	Discuss the principles and theory related to superconductors and explore their technological applications	Understand
C123.6	Integrate various properties of nanomaterial's and their usage in other engineering branches	Create
<b>SPECIFIC LEARNING OUTCOMES – DATA STRUCTURES</b>		
C124.1	Analyze the performance of algorithms to find the time and space complexities and define the asymptotic notations.	Apply
C124.2	Select and design appropriate sorting algorithm	Create
C124.3	Develop the applications using structures, unions, stacks, queues and linked list	Create
C124.4	Outline various tree structures	Analyse
C124.5	Analyse and design various Graph and Hashing techniques	Create
C124.6	Outline various file organization techniques	Analyse
<b>SPECIFIC LEARNING OUTCOMES –COMMUNICATIVE ENGLISH – I</b>		
C125.1	Illustrate academic lectures and English spoken by Native speakers for better.	Apply
C125.2	Analyse reading strategies for comprehension for academic texts.	Analyse
C125.3	Develop better speaking skills through participation in activities such as role plays, group discussions and structured talks/oral presentations.	Create
C125.4	Analyse effective strategies for good writing while summarizing, writing essays.	Analyse
C125.5	Interpret grammatical structures and vocabulary and their appropriate use in speech and writing.	Understand
C125.6	Evaluate text and identify errors of grammar.	Evaluate
<b>SPECIFIC LEARNING OUTCOMES – COMPUTER SCIENCE AND ENGINEERING WORKSHOP</b>		
C126.1	Identify the internal parts of a Computer, Specifications and Computer Assembling	Remember
C126.2	Build the Operating System Installation Process and its Features.	Create
C126.3	Use tools for preparation of Documentation, Budget Sheet, PPT etc	Apply
C126.4	Analyse Networking of Computers using Wired and Wireless Connectivity, Internet required Information	Analyse
C126.5	Describe the Raspberry Pi Board and connect things to Computer.	Understand
C126.6	Develop Graphics, videos and web Pages by Using Adobe Spark or any other tool.	Create
<b>SPECIFIC LEARNING OUTCOMES – COMMUNICATIVE ENGLISH - I LAB</b>		
C127.1	Differentiate various accents spoken by foreign speakers.	Understand
C127.2	Apply suitable reading strategies for comprehension of texts on monitor to get general idea and locate specific information.	Apply

C127.3	Compose talks extemporarily by practicing talks on general topics.	Create
C127.4	Analyse effective strategies for good writing a summary while listening to lectures.	Analyse
C127.5	Interpret techniques and strategies of Paraphrasing and précis writing.	Understand
C127.6	Evaluate text and identify errors of grammar.	Evaluate
<b>SPECIFIC LEARNING OUTCOMES- BASIC ELECTRICAL &amp; ELECTRONICS ENGINEERING LAB</b>		
C128.1	Test the concept of circuit laws and network theorems	Evaluate
C128.2	Determine the characteristic of DC generator and DC Motor also speed control of DC Motor	Apply
C128.3	Analyse the characteristics of solar panel, transformer and induction motor	Analyse
C128.4	Determine the characteristics of Diodes, BJT, FET and Operational Amplifiers	Remember
C128.5	Construct RS, JK Flip-flops using Logic Gates	Create
C128.6	Demonstrate the functioning of Amplitude, Frequency Modulation and Demodulation	Understand
<b>SPECIFIC LEARNING OUTCOMES- APPLIED PHYSICS LAB</b>		
C129.1	Operation of different optical instruments	Skills development
C129.2	Calculate the Dielectric constant	Analyse
C129.3	Calculate the Numerical aperture using optical fiber	Analyse
C129.4	Form Newton rings using interference pattern	Create
C129.5	Wavelength of light of given light source using normal incidence method	Apply
C129.6	Find the thickness of thin wire using Wedge method	Apply
<b>SNO</b>	<b>Course Outcomes Statement</b>	<b>Taxonomy</b>
<b>SPECIFIC LEARNING OUTCOMES - NETWORK THEORY</b>		
C121.1	Analyze the Electrical circuits using various network reduction techniques.	Analyze
C121.2	Demonstrate the transient response of series and parallel RL, RC and RLC circuits for DC excitations.	Create
C121.3	Analysis of Electrical circuits with sinusoidal input.	Understand
C121.4	Evaluate frequency response to understand behaviour of Electrical circuits	Evaluate
C121.5	Determination of network parameters using network theorems.	Apply
C121.6	Evaluate any circuit parameters using Two port networks.	Evaluate
<b>SPECIFIC LEARNING OUTCOMES – DIFFERENTIAL EQUATIONS AND VECTOR CALCULUS</b>		
C122.1	Solve the linear differential equations with constant coefficients	Apply
C122.2	Solve the linear differential equations with variable coefficients, simultaneous linear equations with constant coefficients.	Apply
C122.3	Solve the first order linear and non-linear partial differential	Apply

	equations	
C122.4	Find the solutions of homogeneous and non homogeneous higher order linear partial differential equations.	Remember
C122.5	Find the gradient of scalar point functions, divergence and curl of vector point functions.	Remember
C122.6	Apply Green's, Stokes and Gauss's divergence theorems to evaluate double and triple integrals.	Apply
<b>SPECIFIC LEARNING OUTCOMES – CHEMISTRY</b>		
C123.1	Explore the band theory of solids for conductors, semiconductors, insulators, the magnetic behavior and colour of complexes. To apply molecular orbital energy level diagram of different molecular species	Understand
C123.2	Differentiate the electrochemical sources of energy	Understand
C123.3	Explore the engineering application of polymeric materials and the basic principle of polymers.	Understand
C123.4	Express the principles of different analytical instruments	Understand
C123.5	Express the principle of supramolecular chemistry in application of molecular machines and switches	Understand
C123.6	Differentiate the materials of construction for battery and electrochemical sensors	Understand
<b>SPECIFIC LEARNING OUTCOMES – DATA STRUCTURES</b>		
C124.1	Analyze the performance of algorithms to find the time and space complexities and define the asymptotic notations.	Apply
C124.2	Select and design appropriate sorting algorithm	Create
C124.3	Develop the applications using structures, unions, stacks, queues and linked list	Create
C124.4	Outline various tree structures	Analyze
C124.5	Analyze and design various Graph and Hashing techniques	Create
C124.6	Outline various file organization techniques	Analyze
<b>SPECIFIC LEARNING OUTCOMES –ENGINEERING WORKSHOP</b>		
C125.1	Apply wood working skills in real world applications	Apply
C125.2	Build different parts with metal sheets in real world applications	Create
C125.3	Apply fitting operations in various applications	Apply
C125.4	Apply different types of basic electric circuit connection	Apply
C125.5	Demonstrate soldering and brazing	Understand
C125.6	Repair the punctured tire of a bicycle	Apply
<b>SPECIFIC LEARNING OUTCOMES – ENGINEERING GRAPHICS LAB</b>		
C126.1	Draw the various curves applied in engineering	Understand
C126.2	Show projections of solids and sections graphically	Understand
C126.3	Draw the development of surfaces of solids	Apply
C126.4	Use computers as a drafting tool	Understand
C126.5	Draw isometric drawings using CAD package	Apply
C126.6	Draw orthographic drawings using CAD package	Apply
<b>SPECIFIC LEARNING OUTCOMES – NETWORK THEORY LAB</b>		
C127.1	Verify Kirchhoff's laws.	Analyze

C127.2	Design resonant circuit for given specifications.	Create
C127.3	Evaluate network parameters using network theorems.	Evaluate
C127.4	Design electrical circuit for given specifications.	Create
C127.5	Measure time constants of RL and RC circuits.	Evaluate
C127.6	Characterize and model the network in terms of all network parameters	Apply
<b>SPECIFIC LEARNING OUTCOMES- CHEMISTRY LAB</b>		
C128.1	Determine the strength of an acid by Conduct metric titrations	Apply
C128.2	Determinethe cell constant and conductance of solutions by conductometry	Apply
C128.3	Synthesize of advanced polymer materials	Create
C128.4	Measure the strength of an acid present in secondary battery	Evaluate
C128.5	Determine the potentials and EMFs of solutions by Potentiometer	Apply
C128.6	Analysethe IR and NMR of some organic compounds	Analyze
<b>SPECIFIC LEARNING OUTCOMES- DATA STRUCTURES LAB</b>		
C129.1	Build code to implement string operations.	Create
C129.2	Analyze Different searching and sorting techniques.	Analyze
C129.3	Apply various data structures such as arrays, stacks, queues, linked lists to solve computing problems	Apply
C129.4	To analyze tree data structure and traversal techniques	Analyze
C129.5	Develop the code for file organization techniques.	Create
C129.6	Design tables and perform various numerical operations on the table.	Design