LENDI INSTITUTE OF ENGINEERING AND TECHNOLOGY
(Autonomous)

(Approved by A.I.C.T.E & Affiliated to JNTU, Kakinada)
Accredited by NAAC with "A" Grade & NBA
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DEPARTMENT OF SCIENCE AND HUMANITIES

List Of Course Outcomes (CO)

Regulations: R20   **Branch: CSE**

COURSECODE &NAME	CO	CO STATEMENT
		SEMESTER-1(I-I)-R20
C101 Communicative English	**C101.1**	Understand the value of Human Conduct for career development through life skills: Ethics & Values and use root words and Prepositions without errors. Gain reading skills for comprehension, specific information, gist, and pleasure through extensive reading. Enhance pronunciation with befitting tone for clarity in a speech to communicate language effectively.
	C101.2	Observe the significance of imagery in poetry to use it in real-time contexts and learn to use and misuse of Articles, Prefixes, Suffixes, and Punctuations. Gain reading skills for comprehension, specific information, gist, and pleasure through extensive reading. Participate in short conversations in routine contexts on topics of interest and ask questions and Make requests politely.
	C101.3	Acquire conversation skills through drama and enhance the correct use of Nouns, Pronouns, Verbs and Concord to write paragraphs effectively. Gain reading skills for comprehension, specific information, gist, and pleasure through extensive reading. Listen for specific information, gist, note-taking, note-making and comprehension and develop convincing and negotiating skills through debates.
	C101.4	Develop reading for inspiration, interpretation & innovation and learn to use modifiers, synonyms and antonyms to write essays effectively. Gain reading skills for comprehension, specific information, gist, and pleasure through extensive reading
	C101.5	Learn meaningful use of language by avoiding meaningless cliches, bureaucratic euphemisms and academic jargon in order to acquire the skill of summarizing. Gain reading skills for comprehension, specific information, gist, and pleasure through extensive reading
	C102.1	*Apply* numerical methods and implement interpolation techniques to solve real-world problems in engineering.

C102 **Numerical Method and Ordinary Differential Equations**	**C102.2**	*Apply* numerical methods to solve ordinary differential equations that arise in various engineering fields.
	C102.3	*Apply* the first order ordinary differential equations to solve various engineering problems.
	C102.4	*Apply* the higher order ordinary differential equations to solve various engineering problems.
	C102.5	*Apply* the Laplace transform to solve differential equations and integral equations that arise in various engineering fields.
C103 **Problem Solving and Programming using C**	**C103.1**	Illustrate the Fundamental concepts of Computers and basics of computer programming.
	C103.2	Use Control Structures and Arrays in solving complex problems.
	C103.3	Develop modular program aspects and Strings fundamentals.
	C103.4	Demonstrate the ideas of pointers usage.
	C103.5	Solve real world problems using the concept of Structures, Unions and File operations.
C104 **Applied Physics**	**C104.1**	Interpret the interaction of optic energy with matter on the basis of interference.
	C104.2	Explain the principles of diffraction of light by using diffraction grating.
	C104.3	Apply the principles of polarization and Lasers to computer science engineering.
	C104.4	Enumerate the applications of Fiber Optics to computer science engineering.
	C104.5	Identify the principles of Quantum computing based on Quantum Physics.
C105 **Essentials of Electrical & Electronics Engineering**	**C105.1**	Able to *Apply* concept of KVL/KCL and network theorems in solving electrical circuits
	C105.2	Able to *Measure* the performance quantities such as losses, efficiency of DC machines and transformers
	C105.3	Able to *Measure* the performance quantities such as losses, efficiency of transformers and Induction motor
	C105.4	Able to *analyze* Understand the importance and applications of p-n junction diode& Rectifiers.
	C105.5	Able to *Understand* the configurations and applications of Op-Amps.
C106 **Problem Solving and programming using C Lab**	**C106.1**	Implement basic programs in C and design flow charts in Raptor.
	C106.2	Use Conditional and Iterative statements to solve real time scenarios in C.
	C106.3	Implement the concept of Arrays and Modularity and Strings.
	C106.4	Apply the Dynamic Memory Allocation functions using pointers.
	C106.5	Develop programs using structures and Files.
C107 **Applied Physics Lab**	**C107.1**	*Identify* the working principles of laboratory experiments in optics, mechanics, electromagnetic and electronics.
	C107.2	*Apply* the working principles of laboratory experiments in optics, mechanics, electromagnetic and electronics and perform the experiments using required apparatus.
	C107.3	*Compute* the required parameter by suitable formula using

		experimental values (observed values) in mechanics, optics, electromagnetic and electronic experiments.
	C107.4	*Analyze* the experimental results through graphical interpretation.
	C107.5	*Recognize* the required precautions to carry out the experiment and handling the apparatus in the laboratory.
C108 **Essentials of** **Electrical &** **Electronics** **Engineering Lab**	C108.1	Prove the laws and theorems.
	C108.2	Analyze the characteristics of DC Machines.
	C108.3	Identify the performance of a Transformer.
	C108.4	Analyze the V-I characteristics of diode.
	C108.5	Develop Inverting and Non-Inverting Amplifier using PSPICE
SEMESTER- 2 (I-II)-R20	
C109 **Linear Algebra and** **Multivariable** **Calculus**	C109.1	Apply the matrix algebra techniques to engineering applications.
	C109.2	Apply the concepts of eigen values and eigen vectors to free vibration of a two-mass system.
	C109.3	Apply partial differentiation to find maxima and minima of functions of several variables
	C109.4	Evaluate the volume and surface area of solids using multiple integrals.
	C109.5	Apply vector differential operators to find potential functions and estimate the work done against a field, circulation and flux using vector integral theorems.
C110 **Mathematical** **Techniques**	C110.1	*Apply* mean value theorems to real world problems.
	C110.2	*Apply* Z-transforms to solve various engineering problems.
	C110.3	*Apply* Fouroer series to practical harmonic Analysis.
	C110.4	*Evaluate* Fourier transform of a function.
	C110.5	*Apply* the partial differential equations to solve various engineering problems.
C111 **Applied Chemistry**	C111.1	Distinguish thermoplastics, thermosetting plastics, elastomers and analyze the importance of smart polymers
	C111.2	Discuss the working principle and applications of primary, secondary battery cells and fuel cells.
	C111.3	Compare the working principle and materials used in Floppy, CD and pen drive & explain the applications of semiconductors and liquid crystals.
	C111.4	Demonstrate the working principle of Photo Voltaic Cell, Ocean Thermal Energy Conversion (OTEC).
	C111.5	Illustrate the preparation, properties and applications of Nano materials and applications of computational chemistry.
C112 **Engineering** **Drawing**	C112.1	Apply the basics of engineering drawing to construct the polygons, curves and orthographic projections of points.
	C112.2	Draw the orthographic projections of straight lines inclined to both the planes.
	C112.3	Draw the projections of planes in various conditions.
	C112.4	Draw the projections of regular solids inclined to one of the

		planes.
	C112.5	Develop 3Disometricviewsfrom2Dorthographicviews and vice versa.
C113 Data Structures	C113.1	Analyze different searching and sorting Techniques.
	C113.2	Analyze concepts of linked lists and with their implementation of different Linked Lists
	C113.3	Apply the concepts of stacks and queues in real time applications
	C113.4	Analyze the nonlinear data structures trees and their operations
	C113.5	Implementation of different advanced Trees with their applications.
C114 Communicative English Lab	C114.1	Acquire Listening skills for answering questions, make formal presentations without graphical elements, prioritize information from reading texts, paraphrase short academic texts and get awareness about plagiarized content and academic ethics.
	C114.2	Comprehend academic lectures by taking notes, make formal presentations on academic topics using PPT slides with relevant graphical elements, distinguish facts from opinions while reading, write formal letters and emails and use a range of vocabulary in formal speech and writing.
	C114.3	Participate in group discussions using appropriate language strategies, comprehend complex texts, produce logically coherent argumentative essays and use appropriate vocabulary to express ideas and opinions.
	C114.4	Draw inferences and conclusions using prior knowledge and verbal cues, express thoughts and ideas accurately and fluently, develop advanced reading skills for a deeper understanding of texts, prepare a CV with a cover letter to seek internship/ job, and understand the use of passive voice in academic writing.
	C114.5	Develop advanced listening skills for an in-depth understanding of academic texts, make presentations collaboratively, understand the structure of Project Reports and use grammatically correct structures with a wide range of vocabulary.
C115 Applied Chemistry Lab	C115.1	*Apply* the working principles of laboratory experiments in electronics, pH meter, and Conductivity meter to perform the experiments.
	C115.2	*Determine* the amount of zinc and copper using classical methods of titration
	C115.3	*Analyze* the experimental results through graphical interpretation.
	C115.4	*Recognize* the required precautions to carry out the experiment and handling the apparatus in the laboratory.
	C115.5	*Synthesize* polymers using condensation polymerization
C116 Data structures using C Lab	C116.1	Analyze different searching and sorting Techniques.
	C116.2	Analyze concepts of linked lists and with their implementation of different Linked Lists
	C116.3	Apply the concepts of stacks and queues in real time

		applications
	C116.4	Analyze the non -linear data structures trees and their operations
	C116.5	Implementation of different advanced Trees with their applications.
C117 Environmental Science	**C117.1**	*Understands* about the natural resources and environmental impacts and which kind of methods are to be applied for the sustainable development.
	C117.2	*Acquire* knowledge on environmental pollution and their effects on biotic and a biotic components and control measures of pollution.
	C117.3	Student will be able to know about the environment, components, structure, functions of the environment and ecosystem. Ability to understand the biodiversity of India and identifies its threats. *Apply* the knowledge about the conservation practices to protect the biodiversity.
	C117.4	Able to *identify* social issues both rural and urban environment and the possible means to apply the environmental legislations of India towards sustainable development.
	C117.5	Able to *acquire* the knowledge on environmental assessment and stages involved in EIA and environmental audit for the self sustaining and eco friendly green campus
C118 Community Service Project	**C118.1**	Creating interest in new avenues for research and publication via new relationships between faculty and community through self-learning
	C118.2	Providing networking opportunities with engaged faculty in other disciplines or institutions
	C118.3	Creating stronger commitment to one's research work.
	C118.4	Enhancing community relations through Valuable human resources needed to achieve community goals
	C118.5	Crating new energy, enthusiasm and perspectives applied to community work