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

Jonnada (Village), Denkada (Mandal), Vizianagaram Dist – 535 005

Phone No. 08922-241111, 241112

E-Mail: lendi_2008@yahoo.com   Website: www.lendi.org

DEPARTMENT OF SCIENCE AND HUMANITIES

List Of Course Outcomes (CO)

Regulations: R19   **Branch: EEE**

COURSECODE &NAME	CO	CO STATEMENT
		SEMESTER-1(I-I)-R19
C101 **Linear Algebra and Multivariable Calculus**	C101.1	*Apply* the matrix algebra techniques to engineering applications.
	C101.2	*Apply* the concepts of eigen values and eigen vectors to free vibration of a two mass system.
	C101.3	*Apply* mean value theorems to real world problems.
	C101.4	*Apply* the first order ordinary differential equations to solve various engineering problems.
	C101.5	*Apply* the higher order ordinary differential equations to solve various engineering problems.
C102 **English**	C102.1	*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.
	C102.2	*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 Punctuation. Gain reading skills for comprehension, specific information, gist, and pleasure through extensive reading.
	C102.3	*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.
	C102.4	*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.
	C102.5	*Learn* meaningful use of language by avoiding meaningless

		clichés, 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.
C103 **Engineering** **Chemistry**	**C103.1**	*Distinguish* thermoplastics, thermosetting plastics and elastomers.
	C103.2	*Design* the metallic materials to prevent the corrosion.
	C103.3	*Discuss* the working principle and applications of primary, secondary battery cells, fuel cells and Photo Voltaic Cell.
	C103.4	*Compare* the working principle and materials used in Floppy, CD and pen drive.
	C103.5	*Illustrate* the preparation, properties and applications of Nano materials and importance of green chemistry.
C104 **Problem Solving and Programming using C**	**C104.1**	Develop algorithms and flowcharts and also Understand the compilation, debugging, execution and writing of basic C programs
	C104.2	Develop C Programs using control and iterative statements
	C104.3	Develop C programs using Arrays and functions
	C104.4	Apply the knowledge of strings and pointers in programming
	C104.5	Comprehend file handling and user defined data types
C105 **Communicative** **English Lab -I**	**C105.1**	Enhance pronunciation with befitting tone for clarity in a speech to communicate language effectively.
	C105.2	Participate in short conversations in routine contexts on topics of interest and ask questions and make requests politely
	C105.3	Listen for specific information, gist, note-taking, note-making and comprehension and develop convincing and negotiating skills through debates
	C105.4	Acquire effective strategies for good writing and demonstrate the same in summarizing and reporting
	C105.5	Gain knowledge of grammatical structures and vocabulary for day-to-day successful conversations.
C106 **Engineering** **Chemistry Lab**	**C106.1**	Explain the functioning of the instruments such as pH, Viscometer, Conductivity and Potentiometric meters.
	C106.2	*Interpret* the graphical values to analyze the experimental results.
	C106.3	*Determine* the concentrations of Acid, Zinc, Iron and Copper.
	C106.4	*Compare* viscosities of different oils.
	C106.5	*Prepare* polymers and nano materials.
C107 **Problem Solving and Programming using C**	**C107.1**	Develop algorithms and flowcharts and also Understand the compilation, debugging, execution and writing of basic C programs
	C107.2	Develop C Programs using control and iterative statements
	C107.3	Develop C programs using Arrays and functions
	C107.4	Apply the knowledge of strings and pointers in programming
	C107.5	Comprehend file handling and user defined data types
C108	**C108.1**	*Explain* the limitations, tolerances, Safety aspects of electrical systems and wiring.
	C108.2	*Select* wires/cables and other accessories used in different types of wiring.

Electrical Engineering Workshop	**C108.3**	*Make* simple lighting and power circuits.
	C108.4	*Measure* current, voltage and power in a circuit.
	C108.5	*Apply* starting methods to AC and DC Machines.
C109 Environmental Science	**C109.1**	*Understand* about the environment its structure and components, along with the natural resources along with various impacts of over utilization of it.
	C109.2	*Illustrate* about ecosystem and know the importance of the biodiversity along with biodiversity of India and identify its threats and conservation practices to protect it.
	C109.3	*Understands* about various attributes of different types of pollution and their impacts on the environment and control methods along with waste management practices.
	C109.4	*Relate* the current environmental impacts with the societal problems. Identify the environmental legislation of India towards sustainable development.
	C109.5	*Identify* the current population growth with their impacts and apply the knowledge how to manage environment issues.
SEMESTER-1(I-II)-R19		
C110 Transform Techniques and Partial Differential Equations	**C110.1**	*Apply* the Laplace transform to solve differential equations and integral equations that arise in various engineering fields.
	C110.2	*Apply* multivariable calculus to solve optimization problems.
	C110.3	Find the Fourier series of periodic functions and *evaluate* Fourier integral, Fourier transform and inverse Fourier of a given function.
	C110.4	*Apply* the partial differential equations to solve various engineering problems.
	C110.5	*Understand* the concept of Z Transforms and able to solve difference equations.
C111 Numerical Methods and Multivariable Calculus	**C111.1**	*Apply* complex integration techniques to find the velocity potential and flux functions of flow problems.
	C111.2	*Evaluate* complex integrals using contour integration techniques, including Cauchy's integral theorem and residue theorem.
	C111.3	*Apply* multiple integral methods to find the areas and volumes of solids.
	C111.4	*Analyze* the behaviour of fluid flow, electromagnetic fields, and other physical phenomena in engineering using vector differentiation.
	C111.5	*Analyze* quantitative measures (like Volume, Mass, Center of Mass, Surface Area, Moment of Inertia) of physical and engineering fields using multiple integrals.
C112 Thermal and Hydro Prime Movers	**C112.1**	*Classify* internal combustion engine and Evaluate the performance of IC engines.
	C112.2	*Estimate* the performance of a steam turbine using vapor power cycles and velocity diagrams.

	C112.3	*Analyze* the different methods for improving the efficiency of gas turbines.
	C112.4	*Apply* the concepts of momentum equation for finding the forces acting on the vanes of the turbines, centrifugal pump.
	C112.5	*Calculate* the performance characteristics of a Hydraulic turbine at different loads.
C113 **Applied Physics**	C113.1	*Interpret* the interaction of optic energy with matter.
	C113.2	*Explain* the properties of polarization and Lasers.
	C113.3	*Classify* the given dielectric and semiconductor material.
	C113.4	*Analyze* Electromagnetic wave propagation in non-conducting medium.
	C113.5	*Apply* the principles of Fiber Optics and nano materials to communication.
C114 **Electrical Circuit** **Analysis – I**	C114.1	*Understands* V-I relationships of basic circuit elements and network reduction techniques.
	C114.2	*Determine* of co-efficient of coupling for a given magnetic circuit.
	C114.3	*Analyzes* single phase ac circuits and understands concepts of phase and power factor.
	C114.4	Extends knowledge of dc analysis to ac circuits and determines selectivity of a RLC resonant circuit.
	C114.5	*Simplify* complex electrical networks by using various network theorems.
C115 **Applied Physics** **Laboratory**	C115.1	*Apply* the working principles of laboratory experiments in optics, mechanics, electromagnetic and electronics and perform the experiments using required apparatus.
	C115.2	*Compute* the required parameter by suitable formula using experimental values (observed values) in mechanics, optics, electromagnetic and electronic experiments.
	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	*Demonstrate* the working principles, procedures and applications.
C116 **Communicative** **English Lab-II**	C116.1	*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.
	C116.2	*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.
	C116.3	*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.
	C116.4	*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.
	C116.5	*Develop* advanced listening skills for 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.
C117 Engineering Drawing	**C117.1**	Apply the basics of engineering drawing to construct the polygons and curves.
	C117.2	Draw the orthographic projections of points and lines.
	C117.3	Draw the projections of planes in various conditions.
	C117.4	Draw the projections of regular solids inclined to one of the planes.
	C117.5	Imagine the isometric views of orthographic views and vice versa.
C118 Engineering Workshop & IT Workshop	**C118.1**	*Apply* wood working skills in real world applications.
	C118.2	*Build* different parts with fitting in engineering applications.
	C118.3	*Apply* forging operations for different black smith applications.
	C118.4	*Understand* the basic components, peripherals and basic operations of a computer.
	C118.5	*Get* hands on experience in trouble shooting a system?
C119 Constitution of India	**C119.1**	*Understand* historical background of the constitution making and its importance for building a democratic India.
	C119.2	*Understand* the functioning of three wings of the government i.e., executive, legislative and judiciary.
	C119.3	*Understand* the value of the fundamental rights and duties for becoming good citizen of India.
	C119.4	*Analyze* the decentralization of power between central, state and local self-government.
	C119.5	*Apply* the knowledge in strengthening of the constitutional institutions like CAG, Election Commission and UPSC for sustaining democracy.