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DEPARTMENT OF SCIENCE AND HUMANITIES

LIET/SH/D-45/2022-23 REV.: 0.0:0.0

LIST OF COURSE OUTCOMES (CO's)

ACADEMIC YEAR: 2022-23

Branch: CSSE

COURSE CODE		
&	СО	CO STATEMENT
NAME		
	C101.1	Enable students to use Computer Assisted Language
		Laboratory (CALL) to enhance their pronunciation through
		stress, intonation and rhythm for routine and spontaneous
		interaction
	C101.2	Attain communicative competency for the fulfillment of
		academic, professional and social purposes.
	C101.3	Attain language Proficiency through Contextualized, Task
		Based Activities to realize employment potential at the end of
C101		the course.
Communicative	C101.4	Acquire listening, speaking, reading and writing skills
English		necessary for survival in the post modern society through task-
		based and skill-based communication practices with judicious
		integration of modern tools.
	C101.5	Develop fluency and accuracy for effective and professional
		communication in real-time situations by using appropriate
		verbiage and contextual knowledge.
	C101.6	Realize the technical communicative competence and
		attainment of group dynamism and problem solving skills
		through standard oral and written language models.
	C102.1	Able to solve non-linear equations using various numerical
		methods. Construct interpolation polynomials for a given data

		using Lagrange's and Newton's interpolation formulae
	C102.2	Apply numerical methods to find derivatives, integrations and
C102		solutions of ordinary differential equations.
Numerical Methods	C102.3	Able to solve the first order ordinary differential equations
and Ordinary		related to various engineering fields and solve the real world
Differential		problems
Equations (NMODE)	C102.4	Able to solve the higher order differential equation and analyze
		physical situations.
	C102.5	Apply the Laplace transform for solving differential equations
		and integral equations.
	C103.1	Illustrate the Fundamental concepts of Computers and basics of
		computer programming.
	C103.2	Use Control Structures and conditional statements in solving
C103		complex problems.
Problem Solving and	C103.3	Demonstrate the ideas of pointers usage. And Arrays in
Programming using		solving complex problems.
C (PSPC)		
	C103.4	Develop modular program aspects and Strings fundamentals.
	C103.5	Solve real world problems using the concept of Structures,
		Unions and File operations.
	C104.1	Interpret the interaction of optic energy with matter
C104	C104.2	Explain the properties of diffraction
Applied Physics	C104.3	Classify the properties of polarization and lasers
	C104.4	Analyze the optical fiber properties with detailed applications
	C104.5	Identify the wave function behavior quantum mechanically.
	C105.1	Able to Apply concept of KVL/KCL and network theorems in
C105		solving electrical circuits
Essentials of	C105.2	Able to Measure the performance quantities such as losses,
Electrical &		efficiency of DC machines and transformers
Electronics	C105.3	Able to Measure the performance quantities such as losses,
Engineering (EEEE)		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.
	C105.1	Implement basic programs in C and design flowcharts in
		Raptor.
C106	C105.2	Use Conditional and Iterative statements to solve real time
Problem Solving and		scenarios in C.
Programming using	C106.3	Implement the concept of Arrays and Modularity and Strings.
C Lab	C106.4	Apply the Dynamic Memory Allocation functions using
		pointers.
	C106.5	Develop programs using structures and Files.
	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	C107.3	Compute the required parameter by suitable formula using
Applied Physics lab		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	C108.1	Prove laws and theorems.
Essentials of	C108.2	Analyze the characteristics of DC Machines.
Electrical &	C108.3	Identify the performance of a transformer.
Electronics	C108.4	Analyze the V-I characteristics of diode
Engineering Lab	C108.5	Develop Inverting and Non-Inverting Amplifier using PSPICE
	C109.1	Apply the matrix algebra techniques to engineering
		applications.
	C109.2	Apply the concepts of Eigen values and Eigen vectors to free
C109		vibration of a two mass system.

Linear Algebra and	C109.3	Apply partial differentiation to find maxima and minima of
Multivariable		functions of several variables
Calculus	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
	C110.1	Apply mean value theorems to real world problems.
	C110.2	Apply elementary number theory concepts, including the
		divisibility properties of numbers to perform modulo arithmetic
C110		and use them in cryptographic applications.
Mathematical	C110.3	Apply simplex method to solve an LPP.
Methods	C110.4	Find the Fourier series of periodic functions and evaluate
		Fourier integral, Fourier transform and inverse Fourier of a
		given function.
	C110.5	Solve partial differential equations of first order using
		analytical methods.
	C111.1	Distinguish thermoplastics, thermosetting plastics, elastomers
		and analyze the importance of smart polymers.
	C111.2	Discuss the working principle and applications of primary,
C111		secondary battery cells and fuel cells.
Applied Chemistry	C111.3	Understand the applications of semiconductors, liquid crystals,
		and materials used in Floppy, CD & pen drive
	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.
	C112.1	Apply the basics of engineering drawing to construct the
		polygons and curves.
C112	C112.2	Draw the orthographic projections of points and lines.
Engineering Drawing	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 3D isometric views from 2D orthographic views and
		vice versa
	C113.1	Analyze different searching and sorting Techniques.
	C113.2	Analyze concepts of linked lists and with their implementation
		of different Linked Lists
C113	C113.3	Apply the concepts of stacks and queues in real time
Data Structures		applications
	C113.4	Analyze the non linear data structures trees and their
		operations
	C113.5	Implementation of different advanced Trees with their
		applications.
	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
C114		reading, write formal letters and emails and use a range of
Communicative		vocabulary in formal speech and writing.
English Lab	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 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
	C115.1	Apply the working principles of laboratory experiments in
		electronics, pH meter, and Conductivity meter to perform the
		experiments.
C115	C115.2	Determine the amount of zinc and copper using classical
Applied Chemistry		methods of titration
Lab	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
	C116.1	Analyze different searching and sorting Techniques.
	C116.2	Analyze concepts of linked lists and with their implementation
		of different Linked Lists
C116	C116.3	Apply the concepts of stacks and queues in real time
Data Structures using		applications
C Lab	C116.4	Analyze the non-linear data structures trees and their operations
	C116.5	Implementation of different advanced Trees with their
		applications.
	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
C117		of pollution.
Environmental	C117.3	Student will be able to know about the environment,
Science		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.
C	117.5	Able to acquire the knowledge on environmental assessment and
	1	stages involved in EIA and environmental audit for the self
	1	sustaining and eco friendly green campus