



GEETHANJALI INSTITUTE OF SCIENCE & TECHNOLOGY::Nellore

Department of Electrical and Electronics Engineering

COURSE OUTCOMES

CAY : 2020-21	Reg : R19	SEM : II	Year : II
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SNO	COURSE OUTCOME STATEMENT	Taxonomy
SPECIFIC LEARNING OUTCOMES – Numerical Methods & Probability theory		
C221.1	Use the numerical techniques find solution of algebraic and transcendental Equations.	Apply
C221.2	Determine the interpolating value of the function using Numerical techniques.	Apply
C221.3	Evaluate definite integrals using Newton cotes Formula.	Apply
C221.4	Utilize numerical methods to find numerical solution of ordinary and partial differential equations.	Apply
C221.5	Explain the basic concepts of probability, random variables and solve real time problems using Baye’s theorem.	Understand
C221.6	Apply probability distributions like Bionomial, Poisson and Normal distributions to solve statistical problems	Apply
SPECIFIC LEARNING OUTCOMES – Electrical Circuit Analysis		
C222.1	Understand the concepts of Locus diagrams and resonance with parameters variation	Understand
C222.2	Apply Network Reduction Techniques for finding two port parameters	Apply
C222.3	Analyze of RL,RC and RLC circuits with AC Excitation	Analyse
C222.4	Analyze of RL,RC and RLC circuits with DC Excitation	Analyse
C222.5	Analyse Fourier series and Fourier Transform of Non sinusoidal sources	Analyse
C222.6	Analysis Different types of Filters and Equalizers.	Analyse
SPECIFIC LEARNING OUTCOMES – Engineering Electro magnetic		
C223.1	Acquires the Knowledge to understand basic principles, concepts and fundamental laws of electric fields.	Understand
C223.2	To describe static electric fields, their behavior in different media and associated Maxwell’s equations.	Understand
C223.3	Acquires the Knowledge to understand basic principles, concepts and fundamental laws of magnetic fields.	Understand
C223.4	To describe static magnetic fields, their behavior in different media and associated Maxwell’s equations.	Understand
C223.5	Acquires the knowledge to understand time- varying fields and interaction between electricity and magnetism.	Understand
C223.6	Acquires the knowledge to calculate the quantities associated with	Apply

	uniform plane wave motion in different media of transmission.	
SPECIFIC LEARNING OUTCOMES – Power Electronics		
C224.1	Articulate the basics of power electronic devices	Understand
C224.2	compare voltages and currents, active and reactive power inputs to converter with and without freewheeling diode for 1Ø and 3Ø converters. and understand phase control technique applied on midpoint and bridge rectifiers.	Apply
C224.3	Understand the concepts of various control strategies, types of choppers and analyze their principle operation, waveforms of voltages and currents at different loads.	Understand
C224.4	Understand the construction, working of single phase and three phase voltage inverters with their waveforms in various operating modes when different loads are applied and the different modulating techniques available	Understand
C224.5	Understand the concept of AC voltage controllers	Understand
C224.6	Understand the concept of Cyclo Converters	Understand
SPECIFIC LEARNING OUTCOMES – Analog Electronic Circuits		
C225.1	List various types of feedback amplifiers, oscillators and large signal amplifiers	Remember
C225.2	Explain the operation of various electronic circuits and linear ICs	Understand
C225.3	Apply various types of electronic circuits to solve engineering problems	Apply
C225.4	Analyze various electronic circuits and regulated power supplies for proper understanding	Analyze
C225.5	Infer choice of transistor configuration in a cascade amplifier	Understand
C225.6	Construct electronic circuits for a given specification	Apply
SPECIFIC LEARNING OUTCOMES – Python Programming		
C226.1	Interpret the basic concepts, modular approaches to solve the problems.	Understand
C226.2	Apply the concepts of conditional execution, recursion, built in functions, turtle to solve the problems	Apply
C226.3	Define and demonstrate the use of built-in String functions	Remember
C226.4	Apply python programs to read and write data from/to files.	Apply
C226.5	Summarize various data structures like Lists, Dictionaries, Tuples and its applications.	Understand
C226.6	Identify Python classes, objects, inheritance, goodies	Apply
SPECIFIC LEARNING OUTCOMES – Universal Human Values		
C227.1	Understand the need, concept and content of value-education individual's life and modifies their aspiration for happiness & prosperity	Understand
C227.2	Comprehend the term self-exploration and its application for self-evaluation and development.	Understand

C227.3	Reconstruct the concepts about different values and discriminate between them.	Understand
C227.4	Understand the concept of co-existence & evaluate the program to ensure self regulation.	Understand
C227.5	Identify the holistic perception of harmony at level of self, family, society, nature .	Understand
C227.6	Professional ethics in their future profession & contribute for making a value based society	Remember
SPECIFIC LEARNING OUTCOMES – Electrical Circuit Analysis Lab		
C228.1	Explain Various Resonance Phenomenon Circuits	Apply
C228.2	Understand and Analyze Various Current Locus Diagrams	Analyse
C228.3	Apply Experimentally for finding Two port parameters	Apply
C228.4	Experimentally verify AC and DC circuits.	Apply
C228.5	Analyse Various circuits using DC Excitation	Analyse
C228.6	Analyse Various circuits using AC Excitation	Analyse
SPECIFIC LEARNING OUTCOMES – Electronic Circuits Lab		
C229.1	Analyze various amplifier circuits	Analyze
C229.2	Construct multistage amplifiers	Apply
C229.3	Construct OPAMP based analog circuits	Apply
C229.4	Understand working of logic gates	Understand
C229.5	Construct and implement Combinational circuits	Apply
C229.6	Construct and implement Sequential logic circuits	Apply
SPECIFIC LEARNING OUTCOMES – Environmental Science		
C2210.1	Gain the knowledge about environment , natural resources and different techniques involved in its conservation.	Understand
C2210.2	Get the information about different eco-systems and its functions.	Understand
C2210.3	Recognize the types of bio-diversity along with values and conservation methods.	Analyse
C2210.4	Gain the knowledge about various environmental pollutions and able to design the environmental friendly process in engineering.	Apply
C2210.5	Gain the knowledge about sustainable development concept and practice it in life, society and Industry.	Apply
C2210.6	Understand the both impacts of population growth on environment and needed measures to protect the environment .	Understand

Coordinator

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COURSE OUTCOMES

CAY : 2020-21	SEM : II		Year : III
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SNO	COURSE OUTCOME STATEMENT	Taxonomy
SPECIFIC LEARNING OUTCOMES – Management Science		
C321.1	Explain the basic concepts of management in modern contexts.	Understand
C321.2	Define organization structures and principles.	Remember
C321.3	Demonstrate production and marketing aspects.	Apply
C321.4	Outline the roles and responsibilities of Human Resource Manager.	Analyse
C321.5	Formulate strategies in the modern management.	Create
C321.6	Compare the modern management practices based on the requirement of the projects.	Evaluate
SPECIFIC LEARNING OUTCOMES – Power Semiconductor Drives		
C322.1	Illustrate the control of Dc motor by Single phase and Three phase converters .	Apply
C322.2	Explain the operation of single and multi quadrant electric drives	Understand
C322.3	Analyze chopper fed DC motors	Analyse
C322.4	Explain stator voltage Speed control methods of Induction motors	Understand
C322.5	Explain rotor voltage Speed control methods of Induction motors	Understand
C322.6	Explain the control of synchronous motor	Understand
SPECIFIC LEARNING OUTCOMES – Power System Protection		
C323.1	Explain the principles of operation of various types of electromagnetic relays, Static relays as well as Microprocessor based relays	Understand
C323.2	Determine percentage of generator winding that is unprotected under fault occurrence for generator protection	Apply
C323.3	Determine the required CT ratio for transformer protection with required calculations	Apply
C323.4	Explain the use of relays in protecting Feeders, lines and bus bars	Understand
C323.5	Solve numerical problems concerning the arc interruption and recovery in circuit breakers	Apply
C323.6	Understand why over voltages occur in power system and how to protect the system	Understand
SPECIFIC LEARNING OUTCOMES – Microprocessors & Microcontrollers		
C324.1	Understands the internal architecture and organization of 8086 processors.	Understand
C324.2	Design and implement programs on 8086 microprocessor.	Create

C324.3	Understands the internal architecture and organization of MSP 430 controller.	Understand
C324.4	Understands the interfacing techniques of MSP 430 and can develop using embedded C programming to design micro controller based systems.	Understand
C324.5	Understands about register, memory and data transfer protocols.	Understand
C324.6	Design and implement some specific real time applications.	Create
SPECIFIC LEARNING OUTCOMES – Power System Analysis		
C325.1	Form the Z_{bus} and Y_{bus} of a given power system network	Create
C325.2	Conduct load flow studies using GS and NR methods	Apply
C325.3	Make Calculations for various types of faults	Apply
C325.4	Determine the transient stability by equal area criterion	Apply
C325.5	Determine steady state stability power limit	Apply
C325.6	Distinguish between different types of buses used in load flow solution.	Understand
SPECIFIC LEARNING OUTCOMES – Programmable Logic Controller & Its Applications		
C326.1	Understand different types of Devices to which PLC input and output modules are connected	Understand
C326.2	Understand various types of PLC registers and create ladder diagrams from process control descriptions.	Understand
C326.3	Use different types PLC functions, Data Handling Function	Apply
C326.4	Develop a coil and contact control system to operate a basic robot and analog PLC operations	Apply
C326.5	Implementation of PLC in analogue operations, arithmetic, logic functions.	Apply
C326.6	Understand the PID module, installation procedure and maintenance	Understand
SPECIFIC LEARNING OUTCOMES – Microprocessors & Microcontrollers Laboratory		
C327.1	Understands the MASM tool for assembly programming.	Understand
C327.2	Execution of different programs for 8086 in Assembly Level Language using MASM Assembler basic operations	Apply
C327.3	Design Programs to works on large data and strings using MASM	Create
C327.4	Understand the Code Composer Studio for Embedded C Programming.	Understand
C327.5	Program MSP 430 for various applications.	Create
C327.6	Design and implement some specific real time applications	Create
SPECIFIC LEARNING OUTCOMES – Power Electronics & Simulation Laboratory		
C328.1	Test the turn on-turn off characteristics of SCRs.	Evaluate
C328.2	Analyze the different commutation circuits	Analyze
C328.3	Test Single phase voltage controllers and chopper with R and RL load	Evaluate
C328.4	Test different types of Single phase converters and Inverters with R and RL load	Evaluate
C328.5	Analyze the TPS7A4901, TPS7A8300 and TPS54160 buck regulators	Evaluate
C328.6	Design the low cost buck and boost converter with suitable software tool	Create
SPECIFIC LEARNING OUTCOMES – Advanced English Language Communication Skills (AELCS) Laboratory		
329.1	Learning new vocabulary and analyze the context for proper usage	Apply

329.2	Analysing the texts and multimedia resources for developing comprehension abilities.	Analyze
329.3	Evaluate and exhibit acceptable etiquette essential in social and professional settings	Evaluate
329.4	Develop employability skills by getting command over time management and problem solving strategies.	Create
329.5	Build efficient Written communication skills by practicing project reports.	Create
329.6	Build the ability of using language effectively to face interviews, group discussions, public speaking	Create
SPECIFIC LEARNING OUTCOMES – Comprehensive Online Examination - II		
3210.1	Analyze different methods used for obtaining load flow solution and stability	Analyze
3210.2	Assess the static and dynamic performance characteristics of AC & DC drives using Converters.	Evaluate
3210.3	Understand concepts of Micro processors and Micro controllers	Understand
3210.4	Analyze the concepts of line modeling and protective devices of power systems	Analyze
3210.5	Able to create ladder diagrams from process control descriptions	Apply
3210.6	Understand network synthesis and Measuring equipment of different parameters .	Understand

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SNO	COURSE OUTCOME STATEMENT	Taxonomy
SPECIFIC LEARNING OUTCOMES – Instrumentation		
C421.1	Explain the types of errors occurring in measurement systems	Understand
C421.2	Identify the suitable signal modulation techniques for measurement applications	Remember
C421.3	Differentiate among the types of data transmission and modulation techniques	Understand
C421.4	Understand the working principles of different signal analyzers	Understand
C421.5	Apply digital techniques to measure voltage, frequency and speed	Apply
C421.6	Choose suitable transducers for the measurement of non-electrical quantities	Analyze
SPECIFIC LEARNING OUTCOMES – HVDC Transmission		
C422.1	Compare the HVDC and HVAC transmission systems	Evaluate
C422.2	Understand the operation of various converters used in HVDC transmission systems	Understand
C422.3	Examine the effects of source inductance, reactance on outputs of the HVDC Converter Systems.	Understand
C422.4	Classification of harmonics in HVDC system.	Analyse
C422.5	Summarize the effects of elimination of harmonics in HVDC System.	understand
C422.6	Design of AC filters for protecting the HVDC system from Faults and Transients	Create
SPECIFIC LEARNING OUTCOMES – Comprehensive Viva Voce		
C423.1	Attain oral presentation skills	Understand
C423.2	Attain skills by answering questions in concise manner	Understand
C423.3	Able to respond for the course questions on core subjects	Apply
C423.4	Gain confidence with interview skills	Understand
C423.5	Gain inter personal skills	Understand
C423.6	Ability to improve themselves based on queries	Understand

SPECIFIC LEARNING OUTCOMES – Technical Seminar		
C424.1	Prepare comprehensive report based on topics related to different subjects	Create
C424.2	Prepare comprehensive report based on literature survey related to their field of interest.	Create
C424.3	Identify the modern software tools and technology applicable.	Understand
C424.4	Explain presentation based on their topics	Understand
C424.5	Assess queries given by the revivers and listeners	Evaluate
C424.6	Justify the presentation skills with the feedback	Evaluate
SPECIFIC LEARNING OUTCOMES – Project Work		
C425.1	Demonstrate a sound technical knowledge of their selected project topic.	Apply
C425.2	Able to identify the problem, formulate a prospective solution	Understand
C425.3	Design engineering solutions to the given problem using a systems approach.	Create
C425.4	Conduct experiments or simulation and collect observation for the engineering project	Analyse
C425.5	Develop a prototype of the project by distribution of tasks among the team	Create
C425.6	Communicate with engineers and the community at large in written an oral forms	Create

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