GEETHANJALI INSTITUTE OF SCIENCE & TECHNOLOGY::NELLORE

Department of Electrical and Electronics Engineering

COURSE OUTCOMES

CAY : 2020-21	SEM : II		Year : IV

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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GEETHANJALI INSTITUTE OF SCIENCE & TECHNOLOGY::Nellore

Department of Electrical and Electronics Engineering

COURSE OUTCOMES

CAY : 2021-22	Reg : R20	SEM : II	Year : II

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 – Analog Electronic Circuits		
C222.1	List various types of feedback amplifiers, oscillators and large signal amplifiers	Remember
C222.2	Explain the operation of various electronic circuits and linear ICs	Understand
C222.3	Apply various types of electronic circuits to solve engineering problems	Apply
C222.4	Analyze various electronic circuits and regulated power supplies for proper understanding	Analyze
C222.5	Infer choice of transistor configuration in a cascade amplifier	Understand
C222.6	Construct electronic circuits for a given specification	Apply
SPECIFIC LEARNING OUTCOMES – Power Electronics		
C223.1	Articulate the basics of power electronic devices	Understand
C223.2	compare voltages and currents, active and reactive power inputs to converter with and without freewheeling diode for 1Ø and 3Ø converters.	Apply
C223.3	Understand the concepts of various control strategies, types of choppers and analyze their principle operation, waveforms of	Understand

	voltages and currents at different loads.	
C223.4	Understand the construction, working of single phase and three phase voltage inverters with their waveforms.	Understand
C223.5	Understand the concept of AC voltage controllers	Understand
C223.6	Understand the concept of Cyclo Converters	Understand
SPECIFIC LEARNING OUTCOMES – AC Machines		
C224.1	Understand the basics of ac machine windings, construction, principle of working, equivalent circuit of induction and synchronous machines	Understand
C224.2	Analyze the phasor diagrams of induction and synchronous machine	Analyze
C224.3	Understand the constructional features, principle involved, equivalent circuit of single phase induction motor and various starting methods and its applications	understand
C224.4	Analyze the parallel operation of alternators, synchronization and load division of synchronous generators	Analyze
C224.5	Apply the concepts to determine V and inverted V curves and power circles of synchronous motor	apply
C224.6	Analyze the various methods of starting in both induction and synchronous machines	Analyze
SPECIFIC LEARNING OUTCOMES – Electro Magnetic Field Theory		
C225.1	Acquires the Knowledge to understand basic principles, concepts and fundamental laws of electric fields.	Understand
C225.2	To describe static electric fields, their behavior in different media and associated Maxwell's equations.	Understand
C225.3	Acquires the Knowledge to understand basic principles, concepts and fundamental laws of magnetic fields.	Understand
C225.4	To describe static magnetic fields, their behavior in different media and associated Maxwell's equations.	Understand
C225.5	Acquires the knowledge to understand time- varying fields and interaction between electricity and magnetism.	Understand
C225.6	Acquires the knowledge to calculate the quantities associated with uniform plane wave motion in different media of transmission.	Apply
SPECIFIC LEARNING OUTCOMES – Analog Electronics Laboratory		
C226.1	Analyze various amplifier circuits	Analyze
C226.2	Construct multistage amplifiers	Apply
C226.3	Construct OPAMP based analog circuits	Apply
C226.4	Understand working of logic gates	Understand
C226.5	Construct and implement Combinational circuits	Apply
C226.6	Construct and implement Sequential logic circuits	Apply
SPECIFIC LEARNING OUTCOMES – Power Electronics Laboratory		
C227.1	Understand the various characteristics of power electronic devices with gate firing circuits and forced commutation techniques.	Understand
C227.2	Analyze the operation of single-phase half & fully-controlled converters and inverters with different types of loads.	Analyze
C227.3	Analyze the operation of DC-DC converters, single-phase AC Voltage controllers,	Analyze
C227.4	Analyze various power electronic converters using PSPICE	Analyze

	software.	
C227.5	Analyze the operation cyclo converters with different loads.	Analyze
C227.6	Analyze the operation DC choppers with different loads.	Analyze
SPECIFIC LEARNING OUTCOMES – AC Machines Laboratory		
C228.1	Analyze load test, no-load and blocked-rotor tests for construction of circle diagram and equivalent circuit determination in a single phase induction motor	Analyze
C228.2	understand and analyze speed control techniques of three phase induction motor	Apply
C228.3	understand to predetermine regulation of a three-phase alternator by synchronous impedance and MMF method	understand
C228.4	understand to predetermine regulation of a three-phase alternator by Zero Power Factor method	understand
C228.5	Determine Xd and Xq salient pole synchronous machine	Apply
C228.6	Evaluate and analyze V and inverted V curves of 3 phase synchronous motor	Evaluate
SPECIFIC LEARNING OUTCOMES – Circuits Simulation & Analysis Using Pspice		
C229.1	Analyse various DC & AC circuits using PSPICE software	Analyse
C229.2	Analyse single-phase half controlled converters	Analyse
C229.3	Analyse single-phase fully controlled converters	Analyse
C229.4	Analyse single-phase Square wave and PWM inverters	Analyse
C229.5	Analyse three-phase Square wave and PWM inverters	Analyse
C229.6	Analyse single-phase AC Voltage controllers with different loads.	Analyse
SPECIFIC LEARNING OUTCOMES – Design Thinking For Innovation		
C2210.1	Understand the concepts related to design thinking	Understand
C2210.2	Understand the fundamentals of Design Thinking and innovation	Understand
C2210.3	Apply the design thinking techniques for solving problems in various sectors	Apply
C2210.4	Analyse to work in a multidisciplinary environment	Analyse
C2210.5	Evaluate the value of creativity	Evaluate
C2210.6	Understand specific problem statements of real time issues	Understand

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Department of Electrical and Electronics Engineering

COURSE OUTCOMES

CAY : 2021-22	Reg: R19	SEM : II	Year : III

SNO	COURSE OUTCOME STATEMENT	Taxonomy
SPECIFIC LEARNING OUTCOMES – Signals & Systems		
C321.1	Describe the basic periodic signals by applying Fourier series.	Understand
C321.2	Apply Fourier transform to solve problems.	Apply
C321.3	Discuss the Fourier transform of Discrete-time signals.	Understand
C321.4	Analyze the filter characteristics and physical realization of LTI system.	Analyze
C321.5	Demonstrate the continuous-time signals and systems using Laplace transforms.	Apply
C321.6	Outline the discrete-time signals and systems using Z-transforms.	Analyze
SPECIFIC LEARNING OUTCOMES – Digital Computer Platforms		
C322.1	Describe the basic architecture and Interrupt service routines of 8086 microprocessor.	Understand
C322.2	Explain different interfacings, serial communication standards of 8086 microprocessor.	Understand
C322.3	Write Assembly language programming in Microprocessor for various applications.	Apply
C322.4	Explain the basic architectures of 8051 microcontroller and TMS320LF2407 DSP Controller.	Understand
C322.5	Write Assembly Language Programs for Microcontroller and Digital Signal Processors for real-time control applications.	Apply
C322.6	Write HDL programming and understanding of different FPGA boards.	Apply
SPECIFIC LEARNING OUTCOMES – Power System Analysis		
C323.1	Form the Z_{bus} and Y_{bus} of a given power system network	Apply
C323.2	Conduct load flow studies using GS and NR methods	Apply
C323.3	Make Calculations for various types of faults	Apply
C323.4	Determine the transient stability by equal area criterion	Apply
C323.5	Determine steady state stability power limit	Apply
C323.6	Distinguish between different types of buses used in load flow solution.	Understand
SPECIFIC LEARNING OUTCOMES – Power Quality		
C324.1	Define power quality issues to ensure meeting of standards.	Remember
C324.2	Apply the concepts of compensation for sags and swells using voltage regulating devices.	Apply
C324.3	Analysis on Power Quality Problems Mitigation by using Unified Power Quality Conditioner.	Analyze

C324.4	Analysis of active power filters to reduce harmonics in distribution systems.	Analyze
C324.5	Analysis of Power converters namely AC to DC converters for renewable energy systems.	Analyze
C324.6		
SPECIFIC LEARNING OUTCOMES – Data Science		
C325.1	Interpret the basic concepts and key connectors of Data Science	Understand
C325.2	Interpret the basic concepts of Python and visualize the data using Python	Understand
C325.3	Explore the mathematical concepts required for Data Science	Understand
C325.4	Apply Classification algorithms and Regression methods to solve real world problems	Apply
C325.5	Apply Clustering algorithms and Natural Language Processing to real world problems	Apply
C325.6	Interpret the concepts of SQL and Map reduce	Understand
SPECIFIC LEARNING OUTCOMES – MEFA		
C326.1	Explain the role and responsibilities of a managerial economist in modern business scenario.	Understand
C326.2	Applythe demand of a product by using demand forecasting methods.	Apply
C326.3	Calculate the Break Even Point (BEP) with the help of production and cost analysis.	Apply
C326.4	Explain their learnings about competitive markets and business economic environment.	Understand
C326.5	Apply the process of selection of investment alternatives using different appraisal methods	Apply
C326.6	Examine the process of preparing financial statements to know financial position of the firm.	Analyze
SPECIFIC LEARNING OUTCOMES – Control Systems &Simulation Laboratory		
C327.1	Design the controllers/compensators to achieve desired specifications	Apply
C327.2	Understand the effect of location of poles and zeros on transient and steady state behavior of systems	Understand
C327.3	Assess the performance, in terms of time domain specifications, of first and second order systems.	Evaluate
C327.4	Design PID controllers for given control system model	Apply
C327.5	Determine the response of a given control system model	Apply
C327.6	Use MATLAB/SIMULINK software for control system analysis and design	Apply
SPECIFIC LEARNING OUTCOMES – Digital computers Platform laboratory		
C328.1	Understands the MASM tool for assembly programming.	Understand
C328.2	Execution of different programs for 8086 in Assembly Level Language using MASM Assembler basic operations	Apply
C328.3	Design Programs to works on large data and strings using MASM	Create
C328.4	Understand the Code Composer Studio for Embedded C Programming.	Understand
C328.5	Program MSP 430 for various applications.	Apply
C328.6	Design and implement some specific real time applications	Apply
SPECIFIC LEARNING OUTCOMES – Social Relevant Project		

329.1	Demonstrate a sound technical knowledge of their Selected project Topic	Apply
329.2	Able to identify the problem, formulate a prospective solution for real live projects	Evaluate
329.3	Design engineering solution to the given problem using a systems approach for solar cell as compared to the conventional batteries.	Create
329.4	Conduct experiments and collect Observation for the planning a building lighting safety system engineering projects.	Analyze
329.5	Develop a prototype of the project by distribution of tasks among the teams for traffic control system projects.	Apply
329.6	Communicate with engineers and the community at large in written an oral forms	Apply
SPECIFIC LEARNING OUTCOMES – Constitution Of India		
3210.1	Understand the importance of constitution	Understand
3210.2	Understand the structure of executive, legislature and judiciary	Understand
3210.3	Understand the philosophy of fundamental rights and duties	Understand
3210.4	Understand the autonomous nature of constitutional bodies like Supreme Court and high court controller and auditor general of India and Election Commission of India.	Understand
3210.5	understand the central-state relation in financial and administrative control	Understand
3210.6	Understand the process of Election Commission	Understand
SPECIFIC LEARNING OUTCOMES – Comprehensive Online Examination		
3211.1	Analyze the solutions o different single phase & Three phase Circuits	Analyze
3211.2	Assess the static and dynamic performance characteristics of AC & DC drives using Converters.	Evaluate
3211.3	Understand concepts of AEC, Micro processors and Micro controllers	Understand
3211.4	Analyze the concepts of Generation ,line modeling and protective devices of power systems	Analyze
3211.5	Analyse the operation and performance of electrical machines	Apply
3211.6	Understand network synthesis and Measuring equipment of different parameters .	Understand

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