



LORDS INSTITUTE OF ENGINEERING & TECHNOLOGY

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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING COURSE OUTCOMES (CO) II-I SEMESTER

Course Name: Mathematics - IV (C113BD)

Year / Sem: II / I

Items	Course Outcomes	Taxonomy
C113BD.1	Analyze the complex functions with reference to their analyticity, integration using Cauchy's integral theorem	analyze
C113BD.2	Find the Taylor's and Laurent's series expansion of complex functions	Understand
C113BD.3	Evaluating system of the bilinear transformation	Evaluate
C113BD.4	Express any periodic function in term of sines and cosines	Understand
C113BD.5	Express a non-periodic function as integral representation	Understand
C113BD.6	Analyze one dimensional wave and heat equation	analyze

Course Name: Network Theory (C113BK)

Year / Sem: II / I

Items	Course Outcomes	Taxonomy
C113BK.1	Use network techniques, like node analysis and loop analysis, to write equations for large linear circuits.	analyze
C113BK.2	Apply Thevenin & Norton theorems to analyze and design for maximum power transfer	Evaluate
C113BK.3	Apply the concept of linearity and the associated technique of superposition to circuits and networks.	Evaluate
C113BK.4	Apply phasor analysis to AC circuits in sinusoidal steady state.	Evaluate
C113BK.5	Analyze the frequency response of circuits containing inductors and capacitors	analyze
C113BK.6	Analyze transient response of I and II order circuits & circuits using graph theory	analyze

Course Name: Electronic Circuits (C113AQ)

Year / Sem: II / I

Items	Course Outcomes	Taxonomy
C113AQ.1	Student get idea on Various electronics circuits like oscillators	Understand
C113AQ.2	Student able to describe the Multi-vibrations, freq. response analysis clippers and clampers	Understand
C113AQ.3	Students will able to describe the Switching characteristics of semiconductor devices, concept of wave-shaping	Understand
C113AQ.4	Student can apply sufficient analysis for solving real world problems.	Understand
C113AQ.5	Student get idea on Various types of amplifiers	Understand
C113AQ.6	Student able to understand the concept of characteristics of switching devices	Understand

Course Name: Electromagnetic Fields (C133AP)

Year / Sem: II / I

Items	Course Outcomes	Taxonomy
C133AP.1	Should be able to specify the "constitutive relationships" for fields and understand why they are required.	analyze
C133AP.2	Have an ability to determine and describe static and dynamic electric and magnetic fields for technologically important structures: the coil, charge distributions, the dipole, the coaxial cable, dielectric and conducting spheres immersed in electric fields.	Understand

C133AP.3	Knowledge of, physical interpretation, and ability to apply Maxwell's equations to determine field waves, potential waves, energy and charge conservation conditions. Evaluate	analyze
C133AP.4	Experimental measurement of voltages induced by time varying magnetic flux. Flux determination.	Evaluate
C133AP.5	A knowledge of and experimental measurement of the influence of boundaries on waves. Thus, knowledge of and the application of boundary conditions for fields, Brewster's angle to eliminate reflections and polarize radiation, total reflection from a boundary, evanescent fields, and some knowledge of their application to modern optics	Understand
C133AP.6	Basic concept of the guiding of electromagnetic waves by constructive multiple reflections from conductors and dielectrics.	Understand

Course Name: Electrical Machines -I (C133BM)

Year / Sem: II / I

Items	Course Outcomes	Taxonomy
C133BM.1	Student get idea on electromechanical energy conversion	analyze
C133BM.2	Students should analyze the operation & characteristics of speed control methods.	Evaluate
C133BM.3	Calculate losses, efficiency, voltage reg. and other parameters of different machines.	analyze
C133BM.4	Student able to apply different operating conditions where one type of machine is replaced by other to get higher efficiency.	analyze
C133BM.5	Students can able to apply the above conceptual things to real-world electrical and electronics problems and applications.	analyze
C133BM.6	Testing of different types of DC Generators and DC motors	Evaluate

Course Name: Electrical Machines Lab-I (C13309)

Year / Sem: II / I

Items	Course Outcomes	Taxonomy
C13309.1	Students will able to perform experiments on DC Machines	Evaluate
C13309.2	Analysis and performance aspects of dc machines has been improved	analyze
C13309.3	Students will able to evaluate, from experimental data, the operating characteristics of DC Machines	Understand
C13309.4	Practical analysis through viva voce examination conducted for students.	Understand
C13309.5	Students will able to perform experiments on motor generator set.	analyze
C13309.6	.Students will able to perform experiments on compound motors	Understand

Course Name: Network Theory Lab (C13327)

Year / Sem: II / I

Items	Course Outcomes	Taxonomy
C13327.1	Students will able to perform experimental verification of Thevenin and Norton equivalent circuits and the principle of superposition	Evaluate
C13327.2	Students will able to measure the sine wave parameters, such as peak value, rms value, frequency, period and phase angle and dc offset	Understand
C13327.3	Students will able to analyze simulation of DC circuits	analyze
C13327.4	Students will able to use PSPICE simulation of DC transient response, Mesh Analysis and Nodal Analysis	analyze
C13327.5	Students will able to perform experiments on two port networks	
C13327.6	Students will able to perform experiments on RLC series and parallel circuits.	analyze

Course Name: Electronic Devices and Circuits Lab. (C13310)

Year / Sem: II / I

Items	Course Outcomes	Taxonomy
C13310.1	Students can able to operate the laboratory equipments	Evaluate
C13310.2	Students will design and analyze the simple electronic circuits	Understand

C13310.3	Students will design the rectifier circuits and single stage BJT or MOSFET amplifier circuits	Understand
C13310.4	Students will design and analyze the simple amplifier circuits	analyze
C13310.5	Students will design the rectifier ckts and single stage MOSFET amplifier circuits	analyze
C13310.6	Student will design and analyze the clippers & clamper circuits	analyze

Course Name: Renewable Energy Sources (C125AD)

Year / Sem: III / I

Items	Course Outcomes	Taxonomy
C125AD.1	learn and justify the Energy Scenario of Nation	Understand
C125AD.2	understand the Impact of renewable energy generation on environment, Kyoto Protocol and develop themselves to play the role of ideal electrical engineer	Understand
C125AD.3	learn the strategy for meeting the future energy requirements in Global and National scenarios, prospects of renewable energy sources and apply the knowledge to plan for future	Understand
C125AD.4	Learn the basic concept of harnessing different renewable sources of energy like Solar, Wind, Biomass, Geothermal Energy etc. and Biomass in perspective.	Understand
C125AD.5	formulate the Mathematical equation for designing plants for conversion of energy into electrical form based on Solar, Ocean, Fuel Cell, Magneto Hydrodynamic generation etc	Evaluate
C125AD.6	Perform different Hands on Experiment on Solar Energy and set up new laboratory experiments for benefit of the students.	analyze

Course Name: Fundamentals of Management (C125AD)

Year / Sem: III / I

Items	Course Outcomes	Taxonomy
C125AD.1	study the functions of management, objectives, goals, mission and vision on modeling	analyze
C125AD.2	Organization and different types of organization.	Understand
C125AD.3	To describe Plant layouts, plant location, productivity, and types	analyze
C125AD.4	To write Work study, work measurement, methods of work study	analyze
C125AD.5	Describe the Statistical control and different types of control charts.	Understand

Course Name: Power System-II (C125AH)

Year / Sem: III / I

Items	Course Outcomes	Taxonomy
C125AH.1	Brief about resistance, inductance and capacitance of transmission line conductors	analyze
C125AH.2	Students Can study the Performance of short, medium and long transmission lines.	analyze
C125AH.3	Calculate Sag and tension of overhead lines, Underground cable basics	Evaluate
C125AH.4	Study the Concepts of skin, proximity effect, corona and Ferranti effect.	analyze
C125AH.5	Optimal economical operation of power systems	analyze
C125AH.6	Cost evaluation of power systems	Evaluate

Course Name: Electrical Measurements and Instrumentation (C125EF)

Year / Sem: III / I

Items	Course Outcomes	Taxonomy
C125EF.1	To use the techniques and skills for electrical projects.	analyze
C125EF.2	Measurement of R,L,C , Voltage, Current, Power factor , Power, Energy	Evaluate
C125EF.3	Ability to balance Bridges to find unknown values.	Understand
C125EF.4	Ability to measure frequency, phase with Oscilloscope.	Understand
C125EF.5	Ability to use Digital voltmeters.	Understand
C125EF.6	Ability to measure strain, displacement, And Velocity, temp., Pressure, Vacuum, and Flow.	Understand

Course Name: Microprocessors and Microcontrollers (C125AF)**Year / Sem: III / I**

Items	Course Outcomes	Taxonomy
C125AF.1	The Students gained subject of microprocessors and controllers with the basics of CSO,LDICA and STLD	Understand
C125AF.2	Can implement hardware interfacing techniques has been improved	analyze
C125AF.3	Simple programs involving logical branch & cell instruction	analyze
C125AF.4	Study Serial communication standards, serial data transfer schemes	analyze
C125AF.5	Overview of 8051 micro controller, Architecture.	analyze
C125AF.6	Concept of microcontroller architecture and it interfacing with various I/O devices	Understand

Course Name: Electrical Simulation Lab(C125AG)**Year / Sem: III / I**

Items	Course Outcomes	Taxonomy
C125AG.1	Analyze signal generation in different systems.	analyze
C125AG.2	Analyze network by various techniques.	analyze
C125AG.3	Analyze circuit responses.	analyze
C125AG.4	Analyze bridge rectifiers.	analyze
C125AG.5	design an electrical component or system to meet desired needs	Understand

Course Name: Electrical Measurements and Instrumentation Lab. (C12502)**Year / Sem: III / I**

Items	Course Outcomes	Taxonomy
C12502.1	Acquire hand on experience about different measurement devices and its working principles	Evaluate
C12502.2	Acquire knowledge of dealing with magnetic circuit and measurement of its parameters like determination of B-H curve μ_r -H curve and μ_r - B curve using standard solenoid, search coil and Hibbert's magnetic standard.	Understand
C12502.3	Acquire knowledge of principle of calibration of a measuring instrument and plotting of calibration curves.	Understand
C12502.4	Acquire hand on experience and knowledge on working of ammeter, voltmeter, wattmeter, Kelvin's double bridge and wheat stone's bridge, AC bridges, slide wire potentiometer. CT/PT, single – phase energy meter, concept of direct loading and phantom loading, 3-phase energy meter using standard wattmeter, AC potentiometer	Evaluate
C12502.5	Acquire hand-on experience on measurement of parameters and verification of laws of illumination.	Understand
C12502.6	Acquire hand on experience about different measurement devices and its working principles	Understand

Course Name: Switch Gear and Protection (C127HX)**Year / Sem: IV / I**

Items	Course Outcomes	Taxonomy
C127HX.1	Analyze elementary principles of circuit breakers and ARC interruptions	analyze
C127HX.2	Detailed study about types of circuit breakers	Understand
C127HX.3	Concepts of electromagnetic and static relay	Understand
C127HX.4	Concepts of Neutral grounding and protection against over voltages.	Understand
C127HX.5	Analysis of generators and transformers operation	analyze
C127HX.6	Study the generation of over voltages in power systems & protection against the lightning over voltage	Understand

Items	Course Outcomes	Taxonomy
C127GQ.1	To study detailed features of optimum generation allocation including the effect of transmission power.	Understand
C127GQ.2	To design the modeling of turbine generator and automatic controller.	analyze
C127GQ.3	Analyze the concepts of reactive power control and reactive power compensation in transmission system.	analyze
C127GQ.4	To study the advantages and disadvantages of different types compensating equipment for transmission system	analyze
C127GQ.5	To study the advantages and disadvantages of different types compensating equipment for transmission system	Understand
C127GQ.6	Concept of two area frequency control system	Understand

Course Name: Electrical Distribution Systems (C127CT)

Year / Sem: IV / I

Items	Course Outcomes	Taxonomy
C127CT.1	concept of electrical distribution system	analyze
C127CT.2	concept of various electrical loads	analyze
C127CT.3	concept of distribution feeders	analyze
C127CT.4	concept of voltage drop and power loss	analyze
C127CT.5	types of various protective devices	Understand
C127CT.6	concept of voltage control and power factor improvement	Understand

Course Name: Utilization of Electrical Engineering (C127JJ)

Year / Sem: IV / I

Items	Course Outcomes	Taxonomy
C127JJ.1	Types of electric drives and its starting and running characteristics	analyze
C127JJ.2	Concept of heating and welding	Understand
C127JJ.3	Concept of Illumination	Understand
C127JJ.4	Basic principles of light control	analyze
C127JJ.5	Concept of electric traction	analyze
C127JJ.6	Calculation of attractive efforts and specific energy	analyze

Course Name: Digital Signal Processing (C127CK)

Year / Sem: IV / I

Items	Course Outcomes	Taxonomy
C127CK.1	Able to calculate Z-transforms for discrete time signals and system functions	Evaluate
C127CK.2	Ability to calculate discrete time domain and frequency domain of signals using discrete Fourier series and Fourier transform	Evaluate
C127CK.3	Ability to develop Fast Fourier Transform (FFT) algorithms for faster realization of signals and systems.	
C127CK.4	Able to design Digital IIR filters from Analog filters using various techniques	
C127CK.5	Able to design Digital FIR filters using window techniques, Fourier methods and frequency sampling technique.	
C127CK.6	Ability to demonstrate the impacts of finite word length effects in filter design.	Evaluate