



LORDS INSTITUTE OF ENGINEERING & TECHNOLOGY

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

Course Name: Electrical Machines II (C134AG)

Items	Course Outcomes
C2 26.1	The student will be familiar with the single-phase and three-phase transformers, the machines which are the part of our daily life.
C2 26.2	The student is able to test the Transformer to find the efficiency and regulation.
C2 26.3	The student will learn the applications of Auto transformer which includes the starting of 3-phase induction motor.
C2 26.4	The student understands the behavior and utilization of three-phase induction motor in the field of Industry.
C2 26.5	The student is able to know the performance of the machine at different loads from circle diagram
C2 26.6	The student can control the speed of the three-phase induction motor precisely in different ways

Course Name: Control Systems (C134AX)

Items	Course Outcomes
C3 14.1	The student will get a thorough knowledge on open loop and closed loop control systems and concept of feedback.
C3 14.2	The student will get a thorough knowledge mathematical modelling and transfer function derivations of translational and rotational systems.
C3 14.3	The student will get a thorough knowledge transfer function through block diagram algebra and signal flow graphs.
C3 14.4	The student will get a thorough knowledge time response and frequency response analysis of different ordered systems through characteristic equation and time domain specifications.
C3 14.5	The student will get a thorough knowledge stability analysis in time domain and frequency domain.
C3 14.6	The student can able to apply the above conceptual things to real world Electrical and Electronics problems and applications.

Course Name: Digital Electronics (C134BX)

Items	Course Outcomes
C2 24.1	The student will be able to manipulate numeric information in different forms. Example, different bases. signed integers, various codes such as ASCII, Gray & ABCD
C2 24.2	The student will able to manipulate simple Boolean expressions using theorems & postulates of Boolean algebra & to minimize combinational function
C2 24.3	The student will be able to design & analyze small combinational circuits & to use standard combinational function building blocks to build larger more complex circuits.
C2 24.4	The student will be able to design & analyze small sequential circuits, combinational circuits, and logical circuits.
C2 24.5	The student will be able to analyze devices & to use standard sequential functions. Building blocks to build larger more complex circuits.
C2 24.6	The student gains knowledge on the concepts of sequential circuits, analyze & implement synchronous state machine using flip-flops

Course Name: Laplace Transforms, Numerical Methods & Complex Variables (C134CF)

Items	Course Outcomes
C2 11.1	The student will learn methodology that are based on some standard for forming equation using Cauchy's and Lagrange's for easier calculation
C2 11.2	The student will able to find the series solution using Legendries polynomial equations and Bessel differential equations and solve easily
C2 11.3	The student will get familiar with evaluation of integrals using Cauchy's integral , Mc Laurens series and Laurent series expansion of complex function
C2 11.4	The student will able to analyze the complex function with reference to their analytic integration using Cauchy's integral theorem , Taylor's series, Maclaurin's series and Laurent's series expansions of complex functions.
C2 11.5	The student will able to evaluation integrals using residue theorem, transform a given function from z - plane to w – plane.
C2 11.6	The student will able to identify the transformations like translation, magnification, rotation and reflection and inversion, bilinear transformations.

Course Name: Digital Electronics Lab (C13409)

Items	Course Outcomes
C13409.1	Design and test various basic linear application circuits using Op amps
C13409.2	Design and test various signal comparison operation circuits using Op amps and Comparators
C13409.3	Design and test various waveform generation circuits using Op amps, Comparators and IC packages
C13409.4	Design and test various Op amp based Active Filter Circuits
C13409.5	Design and test PLL application circuits including FM Demodulation
C13409.6	Design and test various combinational logic circuits and systems

Course Name: Electrical Machines II Lab. (C13417)

Items	Course Outcomes
C3 17.1	The student gets knowledge on O.C. and S.C. tests on single phase transformer.
C3 17.2	The student gets knowledge on three phase induction motor by conducting no load and blocked rotor tests.
C3 17.3	The student gets a knowledge on V and \wedge curves of three phase synchronous motors.
C3 17.4	The student will be able to determine X_d and X_q of a salient pole synchronous machine.
C3 17.5	The student gets knowledge on a Scott connection of transformers.
C3 17.6	The student will be able to develop equivalent circuit of a single phase induction motor.

Course Name: Control Systems Lab. (C13415)

Items	Course Outcomes
C3 29.1	The student gets practical knowledge on the time response of second order system and characteristics of synchro's.
C3 29.2	The student gets practical knowledge on effect of feedback on DC servo motor
C3 29.3	The student gets practical knowledge on transfer function of DC Generator and DC motor
C3 29.4	The student gets practical knowledge on Effect of P, PD, PI, PID Controller on a second order systems and lag and lead compensation
C3 29.5	The student gets practical knowledge on characteristics of magnetic amplifiers and AC servomotor

Course Name: Power Electronics (C136DJ)

Items	Course Outcomes
C136DJ.1	To study semiconductor power devices for various uses according to its characteristics.
C136DJ.2	Describe the AC-DC, DC-AC and DC-DC Converters for single and three phase controlled rectifiers.
C136DJ.3	Describe the use of PWM to control voltage regulation.
C136DJ.4	Student will able to design a system with the power Electronic devices with required application.
C136DJ.5	Concept of dual converter
C136DJ.6	Concept of cyclo-converter

Course Name: Switch Gear and Protection (C136EA)

Items	Course Outcomes
C136EA.1	Students able to analyze Elementary principle of CB's and ARC interruptions
C136EA.2	Detailed study about Types of CB's
C136EA.3	Student able to describe about electromagnetic and static relay
C136EA.4	Can able to express concepts of Neutral grounding and protection against over voltages.
C136EA.5	To study the Protection of the generators and transformers
C136EA.6	To study the concept of over voltages

Course Name: Power System Analysis (C136DK)

Items	Course Outcomes
C136DK.1	Demonstrate an understanding of the nature of the modern power system, including the behavior of the constituent components and sub-systems
C136DK.2	Analyze a network under both balanced and unbalanced fault conditions and interpret the results
C136DK.3	Demonstrate an awareness of the methods used for voltage regulation in electrical power networks
C136DK.4	Demonstrate an understanding of the factors which determine transient stability in both single machine and multi-machine systems
C136DK.5	Describe the role of insulation co-ordination in the design and operation of power networks, including the role of circuit breakers
C136DK.6	Demonstrate the ability to conduct experiments in the Electrical Engineering Laboratory in accordance with Health and Safety Regulations and to record, interpret and report on the experimental results

Course Name: Linear Digital & Integrated Circuit Analysis (C136CH)

Items	Course Outcomes
C136CH.1	Understand the basic building blocks of linear integrated circuits and its characteristics
C136CH.2	Student are able to understand the logic families and specialized applications of operational amplifier
C136CH.3	To analyze and design active filters
C136CH.4	Understand the waveform generators and oscillators
C136CH.5	Understand the applications of 555 timer
C136CH.6	Understand the theory of ADC&DAC

Course Name: Entrepreneurship and Small Business Enterprises (C136EZ)

Items	Course Outcomes
C136EZ.1	Analyze the business environment in order to identify business opportunities,
C136EZ.2	Identify the elements of success of entrepreneurial ventures
C136EZ.3	Consider the legal and financial conditions for starting a business venture
C136EZ.4	Specify the basic performance indicators of entrepreneurial activity
C136EZ.5	Explain the importance of marketing and management in small businesses venture
C136EZ.6	Interpret their own business plan.

Course Name: Advanced English Communication English Lab (C13601)

Items	Course Outcomes
C13601.1	Improve the students' fluency in English, through a well-developed vocabulary
C13601.2	Enable them to listen to English spoken at normal conversational speed by educated English speakers and respond appropriately
C13601.3	Can communicate their ideas relevantly and coherently in writing.
C13601.4	To analyze different socio-cultural and professional contexts.

Course Name: Power Systems Lab (C13625)

Items	Course Outcomes
C13625.1	Analyze experimental results and effective documentation
C13625.2	Exhibit professional behavior
C13625.3	Analyze the performance of transmission lines and relays
C13625.4	Calculate the steady-state power flow in a power system.
C13625.5	Analyze different types of short-circuit faults which occur in power systems

Analyze

Course Name: Power Electronics Lab (C13624)

Items	Course Outcomes
C13624.1	Students have the capability to get the power electronic converters and their applications.
C13624.2	They are able to do certain projects like simulation of control of electrical apparatus.
C13624.3	Ability to design controlling of AC and DC power using converters with basics.
C13624.4	Analyze the Applications on AC and DC power using converters.
C13624.5	Frequency control by using cyclo converter
C13624.6	PWM control techniques

Course Name: Fundamentals of HVDC & FACTS Devices. (C128BR)

Items	Course Outcomes
C128BR.1	Students get thorough knowledge on basics of HVDC system
C128BR.2	Students able to understand the concept of converter control schemes
C128BR.3	Able to understand the concept of reactive power control and power flow analysis
C128BR.4	Students get thorough knowledge on basics concept of FACTS
C128BR.5	Able to understand the necessity of compensator and their operation
C128BR.6	Students get thorough knowledge on static series compensator and combined compensator

Course Name: Renewable Energy Sources (C128ED)

Items	Course Outcomes
C128ED.1	Students get thorough knowledge on various types of renewable energy sources
C128ED.2	Students able to understand the concepts solar energy collection ,storage & application
C128ED.3	Students get thorough knowledge on principals of wind energy, Biomass
C128ED.4	They able to understand the concept of geothermal energy
C128ED.5	Students can able to understand the theory of OTEC
C128ED.6	They can get thorough knowledge on direct energy conversion

Course Name: EHVAC Transmission (C128BH)

Items	Course Outcomes
C128BH.1	Students get thorough knowledge on general aspects and necessity of extra high voltage transmission
C128BH.2	Students able to understand the concepts of voltage gradient
C128BH.3	Students get thorough knowledge on effects of corona
C128BH.4	They able to understand the electro static field
C128BH.5	Students can understand the theory of travelling waves
C128BH.6	They can get thorough knowledge on voltage control of EHVAC transmission

Course Name: Seminar (C4 29)

Items	Course Outcomes
C4 29.1	The student will be engaged in the integral activities of reading, discussion and composition around a particular topic.
C4 29.2	The student will develop presentation skills.
C4 29.3	The student will gain confidence to face the interviews.
C4 29.4	The student will be able to investigate the advancements in the particular topic.
C4 29.5	The student will be able to distinguish opinions from researched claims.
C4 29.6	The student will be able to prepare appropriate and participate effectively in the presentation.

Course Name: Project Work (C4 2A)

Items	Course Outcomes
C4 2A.1	The student gains knowledge on the basic concepts of electrical engineering and learn the implementation.
C4 2A.2	The student understands the design and analysis of particular problems in project.
C4 2A.3	The students learn MATLAB programming and implementing the Simulink.
C4 2A.4	The student will be able to develop the hardware.
C4 2A.5	The student will learn the complete process of a project – designing, programming, module development.
C4 2A.6	The student will gain practical knowledge.

Course Name: Comprehensive Viva-Voce (C4 2B)

Items	Course Outcomes
C4 2B.1	The student will be able to face interview both at the academic and the industrial sector.
C4 2B.2	The student will be able to exhibit the strength and grip on the fundamentals of the subjects studied in the previous semesters.
C4 2B.3	The student will be able to comprehend all the courses studied in the entire program
C4 2B.4	The student will be able to enhance their communication skills and instructiveness.
C4 2B.5	The student will be able to access themselves in the complete course.
C4 2B.6	The student will revise all the course right from fundamentals.