LORDS INSTITUTE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution)

Approved by AICTE | Affiliated to Osmania University | Accredited 'A' grade by NAAC |

NBA Accredited UG Programmes: ME, ECE, CSE

ELECTRICAL AND ELECTRONICS ENGINEERING

AY:2021-22
ODD SEMESTER
COURSE OUTCOMES

Semester: III Semester(OU)

Course Outcomes:C211 Engineering Mechanics

Student will able to

CO. No.	Description
C211.1	Determine the equilibrium of a particle in space using principle of laws of mechanics and fundamental of mathematics for resolution and composition of force systems.
C211.2	Understand the principles of centroid and moment of inertia of a different shape objects.
C211.3	Solve the problems of simple system with sliding and rolling friction
C211.4	Identify the type of frame and analyze for the forces in the members of the truss (frame) by method of joints and method of sections
C211.5	Understand the kinetics of the rigid bodies and solve simple problems using work-energy method
C211.6	Understand virtual work method and solve simple problems.

Course Outcomes: C212 Mathematics- III

Student will able to

CO. No.	Description
C212 1	Uderstand real life and Engineering Problems through mathematics
C212.2	Get logical thinking and creativity
C212.3	Obtain the knowledge of Probabilty, Random Variables,distributions and its applications
C212.4	Learn the concepts of discrete and continuou distributions
C212.5	Get the knowledge of curve fitting,regression and testing of hypothesis for various parameters
C212.6	Know the Concepts of F-distribution and chi-square distribtion,goodness of fit and test for dependence

Course Outcomes: C213 Electrical Circuit Analysis

Student will able to

CO. No.	Description
C213.1	Obtain steady-state response of electrical circuits.
C213.2	Apply network theorems for the analysis of electrical circuits.
C213.3	Analyse solution of first and second order RL, RC and RLC networks.
C213.4	Apply Laplace transforms for electrical circuits
C213.5	Analyse the behavior of two port networks

Course Outcomes:C214 Electromagnetic Fields

Student will able to

CO. No.	Description
C214 1	Understand the vector calculus for electromagnetism.
C214.2	Obtain the electric fields for simple configurations under static conditions.
C214.3	Analyse and apply the static magnetic fields
C214.4	Understand Maxwell‘s equation in different forms and different media.
C214.5	Understand the propagation of EM waves

Course Outcomes:C215 Electrical Machines -I

Student will able to

CO. No.	Description
C215.1	Understand the concepts of magnetic circuits
C215.2	Understand working principle, laws and working of DC machines
C215.3	Analyze the construction, characteristics and applications of various types of DC generators
C215.4	Analyze the construction, characteristics and applications of various types of DC motors and testing of DC motors
C215.5	Understand working principle, laws and working of 1-Phase Transformer, losses, efficiency and various tests on transformers

Course Outcomes:C216 Analog Electronic Circuits

Student will able to

CO. No.	Description
C216.1	Interpret characteristics of diode in forward and reverse biased mode.
C216.2	Analyse and understand the implementation of various diodes for any application.
C216.3	Compare various BJT Configurations to understand the implementation of appropriate configuration for any given application.
C216.4	Analyse and compare Feedback Amplifiers, Power Amplifiers and Oscillators.
C216.5	Analyse the operation of OP-AMP and it's applications.

Course Outcomes: C217 Electrical Circuits Lab

Student will able to

CO. No.	Description
C217 1	Evaluate the time response and frequency response character sties of R,L, C Series and parallel circuits.
C217.2	Able to validate the network theorems.
C217.3	Able to find various parameters of a two-port network
C217.4	Able to simulate electrical circuits using spice.
C217.5	Able to synthesize networks from a given transfer function.

Course Outcomes:C217 Computer Aided Electrical Drawing Lab

Student will able to

CO. No.	Description
C218.1	Identify and draw different components of electrical systems
C218.2	Draw different control and wiring diagrams
C218.3	Draw winding diagrams of electrical machines
C218.4	To understand the terminology of electric circuit and electrical components
C218.5	To be able to familiarize with electrical machines, apparatus and appliances
C218.6	To acquire knowledge on various Electrical Engineering software

Course Outcomes: C219 Analog Electronics Circuits Lab

Student will able to

CO. No.	Description
C219.1	Study and plot Characteristics of BJT
C219.2	Study Clipper and Clamper circuits
C219.3	Study Oscillator circuits and it's frequency calculations.
C219.4	Demonstrate Rectifier circuits.
C219.5	Demonstrate Op-Amp. Circuits

Semester: V Semester(OU)

Course Outcomes: C311 Electrical Machines-II

Student will able to

CO. No.	Description
C311.1	Understand the construction and working of 3-φ Induction machines.
C311.2	Understand the characteristics and different speed control methods of 3-φ Induction motor.
C311.3	Understand the construction and working of Alternator and Analyze different methods to find the regulation of it.
C311.4	Understand the operation of synchronous motor and its characteristics
C311.5	Understand the working and construction of single phase and special type of machines

Course Outcomes: C312 Power Systems-I

Student will able to

CO. No.	Description
C312.1	Understand Acquire modeling of different short, medium and long transmission lines.
C312.2	Understand the impact of different types of faults on overhead transmission lines.
C312.3	Understand the reasons for voltage variation, importance of maintaining constant voltage in power system and different voltage control methods.
C312.4	Acquire the knowledge of natural impedance of transmission line and significance in the operation of power system network
C312.5	Calculation of fault currents and their significance.

Course Outcomes: C313 Linear Control Systems

Student will able to

CO. No.	Description
C313.1	Understand the concept of the terms control systems, feedback, Mathematical modeling of Electrical and Mechanical systems.
C313.2	Explain the time domain and frequency response analysis of control systems.
C313.3	Acquire the knowledge of various analytical techniques used to determine the stability of control systems.
C313.4	Able to understand the importance of design of compensators.
C313.5	Able to demonstrate controllability and observability of modern control systems

Course Outcomes: C314 Microprocessors & Microcontrollers

Student will able to

CO. No.	Description
C314.1	Students will be able to learn the internal architecture ,memory organization and can develop assembly language programming of 8085 processors.
C314.2	Students will be able to learn instruction set and develop assembly language programming of 8085 microcontroller.
C314.3	The knowledge of Communication between peripherals and the processors through interfacing will be clear.
C314.4	Students will be able to learn the internal architecture ,memory organization and can develop assembly language programming of 8086 processors.
C314.5	Students will be able to learn instruction set and develop assembly language programming of 8051 microcontroller

Course Outcomes: C315 Signals and Systems

Student will able to

CO. No.	Description
C315.1	Classify and analyze the continuous time signals and discrete time signals and systems.
C315.2	Generate discrete time signals through sampling process and reconstruct them.
C315.3	Determine the responses of continuous and discrete-time systems which are represented by differential equations and difference equations.
C315.4	Analyze continuous time systems with the help of Laplace transform and discrete time system with Z-transform.
C315.5	Analyze the continuous and discrete-time systems in frequency domain with the help of Fourier series and Fourier Transform

Course Outcomes: C316 Electrical Distrubution System

Student will able to

CO. No.	Description
C316.1	To uunderstand the concept of different factors used in design of distribution system components, rate structures & billing
C316.2	To design and analysis of sub transmission lines and substations
C316.3	To design and analysis of primary and secondary distribution systems
C316.4	To understand the significance of voltage drop and power loss in the distribution system, and its load flow analysis
C316.5	To understand the need for controlling the PF, distribution system automation

Course Outcomes: C317 Electrical Circuits Lab

Student will able to

CO. No.	Description
C317.1	Evaluate the time response and frequency response character sties of R,L, C Series and parallel circuits.
C317.2	Able to validate the network theorems.
C317.3	Able to find various parameters of a two-port network
C317.4	Able to simulate electrical circuits using spice.
C317.5	Able to synthesize networks from a given transfer function.

Course Outcomes: C318 Control Systems Lab

Student will able to

CO. No.	Description
C318.1	Students able to understand the Charcteristics of AC and DC Servomotor.
C318.2	Able understand the simulation of Time Response and Frequency Response of System
C318.3	Able to understand Performance of P, PI and PID Controllers
C318.4	Able to develop PLC programs for certain applications.
C318.5	Acquire the knowledge of Data acquisition system and Industrial process control.

Course Outcomes: C319 Power Electronics Lab

Student will able to

CO. No.	Description
C319.1	Students have the capability to get the power electronic converters and their applications.
C319.2	They are able to do certain projects like simulation of control of electrical apparatus.
C319.3	Ability to design controlling of AC and DC power using converters with basics.
C319.4	Analyze the Applications on AC and CD power using converters.
C319.5	Frequency control by using cyclo converter

COURSE OUTCOMES

Semester: VII Semester(OU)

Course Outcomes: C411 Basics of Mechanical Engineering
Student will able to

Course.No	Outcomes
C411.1	Understand the basic concepts of Newton law of cooling and Boltzmann Constant for Heat Transfer.
C411.2	Understand the concepts of Lubrication Systems and the Lubricating Oils used in the engines during working.
C411.3	Remembering the concepts of gearing mechanisms and the advantages and Limitations in gearing process.
C411.4	Analyzing the failures of Kinematics in the machines and the real time applications during the working mechanisms.
C411.5	Analyzing the concepts of Compressors and the failures intended during the working of compressors.
C411.6	Understanding the different concepts in the Mechanical Engineering.

Course Outcomes: C412 High Voltage DC Transmission
Student will able to

Course.No	Outcomes
C412.1	Understand the importance of Transmission power through HVDC.
C412.2	Analyse the HVDC Converter operation.
C412.3	Discuss firing angle control of 6 pulse,12 pulse circuits.
C412.4	Analyse the impact of AC system faults on DC system operation.
C412.5	Identify the importance of Harmonics for HVDC system.
C412.6	Identify the importance of filters for HVDC system.

Course Outcomes: C413 Electric Hybrid Vehicles
Student will able to

Course.No	Outcomes
C413.1	Understand the modles of conventional vehicles and theire performance
C413.2	Understand the models to describe hybrid vehicles and their performance.
C413.3	Understand the different possible ways of HEV topologies
C413.4	Understand the different possible ways of energy storage.
C413.5	Understand the different strategies related to energy storage systems

Course Outcomes: C414 Fundamentals of Management for Engineers
Student will able to

Course.No	Outcomes
C414 1	Understand the significance of Management in their Profession
C414.2	Understand the various Management Functions like Planning, Organizing,
C414.3	Students can explore the Management Practices in their domain area.
C414.4	Understand the various Management Functions like Staffing, Leading,
C414.5	Understand the various Management Functions likeMotivation and Control aspects

Course Outcomes: C415 Electrical and Electronics Design Lab
Student will able to

Course.No	Outcomes
C415.1	Students able to learn the practical knowledge related to electrical
C415.2	Fabricate basic electrical circuit elements/networks
C415.3	Students able to learn the Trouble shoot the electrical circuits
C4I5.4	Students able to learn the Design filter circuit for application
C4I5.5	Get hardware skills such as soldering, winding etc.
C4I5.6	Students able to learn the debugging skills.

Course Outcomes: C416 Industrial Oriented Mini Project / Summer Internship
Student will able to

Course.No	Outcomes
C416.1	Design identify basic requirements for a application and propose a cost effective solution
C416.2	Build knowledge through practical assignments and learn the various design methods for solving a problem analysis
C416.3	Develop skill to build design techniques for various problem analysis
C416.4	Summarize the fundamental concepts and techniques used in mini project
C416.5	Make up project enables the student to understand the business process