



LORDS INSTITUTE OF ENGINEERING & TECHNOLOGY

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

NBA Accredited UG Programmes: ME, ECE, CSE

ELECTRICAL AND ELECTRONICS ENGINEERING

AY:2020-21

COURSE OUTCOMES

Semester: III Semester

Course Outcomes:C211 Indian Psychology

Student will able to

Course.No	Outcomes
C211.1	Understanding of key concepts, theoretical perspectives, and trends in industrial psychology.
C211.2	Evaluate the problems thorough and systematic competency model.
C211.3	Analyse the problems present in environment and design a job analysis method.
C211.4	Create a better work environment for better performance
C211.5	Design a performance appraisal process and form for the human behavior.

Course Outcomes:C212 Biology for Engineers

Student will able to

Course.No	Outcomes
C212.1	Apply biological engineering principles, procedures needed to solve real world problems.
C212.2	Understand the fundamentals of living things, their classification, cell structure & biochemical constituents.
C212.3	Apply the concept of plant, animal & microbial systems & growth in real life situations.
C212.4	Comprehend the genetics and the immune system.
C212.5	Know the cause, symptoms, diagnosis and treatment of common diseases.
C212.6	Apply basic knowledge of the application of biological systems in relevant industries

Course Outcomes:C213 Engineering Mechanics

Student will able to

Course.No	Outcomes
C213.1	Draw the free body diagram and determine the resultant and or moments
C213.2	Determine the centroid and second moment of area of different geometric sections
C213.3	Apply the laws of mechanics to determine the efficiency of simple machines with consideration of friction
C213.4	Analyze statically determinate planar frames`
C213.5	Analyze the motion and calculate trajectory characteristics
C213.6	Apply Newton's laws and elastic collisions and motion of rigid bodies

Course Outcomes:C214 Energy Sciences and Engineering**Student will able to**

Course.No	Outcomes
C214.1	Understand the basics of various sources of energy
C214.2	Analyse the present status of conventional energy sources.
C214.3	Understand the working principles of Renewable Energy systems
C214.4	Design and develop waste heat recovery systems.
C214.5	Relate energy economics, standards and future challenges

Course Outcomes:C215Electrical Circuit Analysis**Student will able to**

Course.No	Outcomes
C215.1	Analyze steady-state response of electrical circuits.
C215.2	Apply network theorems for the analysis of electrical circuits.
C215.3	Analyze solution of first and second order RL, RC and RLC networks.
C215.4	Apply Laplace transforms for electrical circuits
C215.5	Analyze the behavior of two port networks
C215.6	Analyze Network functions

Course Outcomes:C216 Electromagnetic Fields**Student will able to**

Course.No	Outcomes
C215.1	Understand the vector calculus for electromagnetism.
C215.2	Obtain the electric fields for simple configurations under static conditions.
C215.3	Analyse and apply the static magnetic fields.
C215.4	Understand Maxwell's equation in different forms and different media
C215.5	Understand the propagation of EM waves

Course Outcomes:C216 Analog Electronics**Student will able to**

Course.No	Outcomes
C216.1	Obtain the the V - I characteristics of diode and analyze various diode applications like rectifiers and regulators.
C216.2	Analyze the construction & working of active devices like BJT & FET in various modes.
C216.3	Recognize the type of feedback and analyze its effect on amplifier characteristics and calculate the frequency of oscillation for different types of oscillator circuits.
C216.4	Calculate the frequency of oscillation for different types of oscillator circuits.
C216.5	Analyze and design different circuits using Ideal Op Amps; Design simple digital circuits using logic gates.

Course Outcomes:C217 Computer Aided Electrical Drawing Lab**Student will able to**

Course.No	Outcomes
C217.1	Identify and draw different components of electrical systems
C217.2	Draw different control and wiring diagrams
C217.3	Draw winding diagrams of electrical machines
C217.4	Draw different starter diagrams of A.C and D.C machine
C217.5	Acquire knowledge on various Electrical Engineering Softwares

Course Outcomes:C2168 Analog Electronics Lab**Student will able to**

Course.No	Outcomes
C218.1	Understand the characteristics of electronics devices Zener Diode in forward bias and reverse bias
C218.2	Demonstrate FET and BJT characteristics. Design two stage RC coupled amplifier
C218.3	Demonstrate OP-AMP and design monostable, astable, bistable multivibrator
C218.4	Demonstrate different applications of diode- clipper, clamper
C218.5	Analyse feedback amplifiers and op-amp oscillator circuits



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COURSE OUTCOMES

Year : III Year

Semester: I Semester

Course Outcomes:C311 Power Electronics

Student will able to

Course.No	Outcomes
C311.01	Understand the characteristics and performance of various power electronic devices.
C311.02	Analyse single and three phase controlled rectifier circuits.
C311.03	Understand choppers circuits and AC voltage controllers
C311.04	Understand the performance of single phase inverter circuits.
C311.05	Analyse the operation of three phase voltage source inverters.
C311.06	Analyse single and three phase controlled rectifier circuits.

Course Outcomes:C312 Power System-II

Student will able to

Course.No	Outcomes
C312.01	Analyze the performance of the transmission lines
C312.02	Understand the concepts of voltage control and compensating methods in power systems
C312.03	Understand the per unit representation of power system
C312.04	Examine the performance of the travelling waves
C312.05	Understand the methods of over voltage protection and insulation coordination in transmission lines
C312.06	Understand the symmetrical components and thereby analyze different faults that occur in transmission lines

Course Outcomes:C313 Measurements and Instrumentation

Student will able to

Course.No	Outcomes
C313.01	Analyze the performance characteristics of each instrument.
C313.02	Illustrate basic meters such as voltmeters and ammeters.
C313.03	To Create students capable of analyzing and solving the varieties of problems and issues coming up in the vast field of electrical measurements.
C313.04	Explain the basic features of Bridges and different types of AC & DC Bridges.
C313.05	Apply the complete knowledge of various electronics instruments/transducers to measure the physical quantities in the field of science, engineering and technology
C313.06	Apply the knowledge of smart and digital metering for industrial applications

Course Outcomes:C314 High Voltage Engineering

Student will able to

Course.No	Outcomes
C314.01	Analyze steady-state response of electrical Understand the basic physics related to various breakdown processes in solid, liquid and gaseous insulating materials.
C314.02	Knowledge of generation and measurement of D. C., A.C., & Impulse voltages
C314.03	Knowledge of how over-voltages arise in a power system protection against these over voltages. circuits..
C314.04	Knowledge of how to protect against these over voltages. circuits
C314.05	Knowledge of tests on H. V. equipment and on insulating materials, as per the standards
C314.06	Understand the Application of various insulating materials

Course Outcomes:C315 Business Economics and Financial Analysis

Student will able to

Course.No	Outcomes
C315.01	student gets the knowledge of managerial economics
C315.02	Student should get knowledge of the basic terminology of economics
C315.03	Ability to get knowledge about the business entities
C315.04	students acquire knowledge of Business Forms.
C315.05	Students know about the types of ownerships.
C315.06	Ability to acquire knowledge about the partnership and sole trader and joint stock company acts

Course Outcomes:C316 Power System Simulation Lab

Student will able to

Course.No	Outcomes
C316.01	Perform various transmission line calculations
C316.02	Understand Different circuits time constants
C316.03	Understand the concept high frequency transients
C316.04	Comparison of different transmission lines parameters
C316.05	perform parameter estimation and fault analysis on Transmission lines
C316.06	Analyze the experimental data and draw the conclusions

Course Outcomes:C317 Power Electronics Lab

Student will able to

Course.No	Outcomes
C317.01	Understand the operating principles of various power electronic converters.
C317.02	Use power electronic simulation packages& hardware to develop the power converters.
C317.03	Analyze and choose the appropriate converters for various applications
C317.04	Design the power converter with suitable switches meeting a specific load requirement.
C317.05	Apply Knowledge to Power electronic Converters with different Applications
C317.06	Apply design knowledge to the Controllers

Course Outcomes:C318 Measurements and Instrumentation Lab**Student will able to**

Course.No	Outcomes
C318.01	Upon completion of study of the course should be able to calibrate and test single phase energy meter, calibrate PMMC voltmeter and calibrate LPF wattmeter.
C318.02	Student should be able to measure resistance, inductance and capacitance
C318.03	Students should be able to measure 3- Φ active power and reactive power
C318.04	Students should be able to test current transformers and dielectric strength of oil.
C318.05	Students should be able to calibrate LVDT and resistance strain gauge.

Course Outcomes:C319 Advanced Communication Skills Lab**Student will able to**

Course.No	Outcomes
C319.01	Acquire vocabulary and use it contextually
C319.02	Listen and speak effectively
C319.03	Develop proficiency in academic reading and writing
C319.04	Increase possibilities of job prospects
C319.05	Communicate confidently in formal and informal contexts
C319.06	Adopt professional behaviour and develop team spirit

Course Outcomes:C3110 Intellectual Property Rights**Student will able to**

Course.No	Outcomes
C3110.01	Identify different types of Intellectual Properties (IPs), the right of ownership, scope of protection as well as the ways to create and to extract value from IP.
C3110..02	Recognize the crucial role of IP in organizations of different industrial sectors for the purposes of product and technology development.
C3110..03	Identify activities and constitute IP infringements and the remedies available to the IP owner and describe the precautions steps to be taken to prevent infringement of proprietary rights in products and technology development.
C3110..04	Be familiar with the processes of Intellectual Property Management (IPM) and various approaches for IPM and conducting IP and IPM auditing and explain how IP can be managed as a strategic resource and suggest IPM strategy.
C3110..05	Be able to anticipate and subject to critical analysis arguments relating to the development and reform of intellectual property right institutions and their likely impact on creativity and innovation.
C3110.06	Be able to demonstrate a capacity to identify, apply and assess ownership rights and marketing protection under intellectual property law as applicable to information, ideas, new products and product marketing



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COURSE OUTCOMES

Year : IV Year

Semester: I Semester

Course Outcomes:C411 Power Semiconductor Drives

Student will able to

Course.No	Outcomes
C411.01	Able to compute inductance and capacitance for different configurations of transmission lines.
C411.02	Design the power converters suitable for particular applications
C411.03	Develop the novel control methodologies for better performance.
C411.04	Understand the basic knowledge of coppers
C411.05	Design the Single Phase Inverters
C411.06	Compute the Problems on voltage Conrol Techquies

Course Outcomes:C412 Power System Operation and control

Student will able to

Course.No	Outcomes
C412.01	Understand the load frequency control of power system
C412.02	Understand the concept of reactive power and voltage control in power system
C412.03	Analyze the optimal scheduling of power plants
C412.04	Understand and apply different methods to solve unit commitment problem
C412.05	Understand the concept of computer control of power systems and data acquisition.

Course Outcomes:C413 HVDC Transmission

Student will able to

Course.No	Outcomes
C413.01	Understand the importance of Transmission power through HVDC.
C413.02	Analyse the HVDC Converter operation.
C413.03	Discuss firing angle control of 6 pulse,12 pulse circuits.
C413.04	Identify the importance of filters for HVDC system.
C413.05	Analyse the impact of AC system faults on DC system operation.

Course Outcomes:C414 Power Quality**Student will able to**

Course.No	Outcomes
C414.01	To understand various Power Electronics devices such as SCR, TRIAC, DIAC, IGBT, GTO etc
C414.02	To understand application of aforesaid Power Electronics devices in Choppers, Inverters and Converters etc.
C414.03	To understand control of Electrical Motors through DC-DC converters, AC Converters etc.
C414.04	To understand the use of Inductors and Capacitors in Choppers, Inverters and Converters.
C414.05	To understand the application of converters and applications.
C414.06	To understand the use of Inverters and Converters etc.

Course Outcomes:C415 Special Machines**Student will able to**

Course.No	Outcomes
C415.01	Knowledge on Special Types of DC Machines
C415.02	To use special machines as transducers for converting physical signals into electrical signals
C415.03	To use micro-processors for controlling different machines
C415.04	To understand the operation of different special machines
C415.05	To select different special machines as part of control system components
C415.06	Understand the concept of Linear Induction Motor

Course Outcomes:C416 Electrical Systems Simulation Lab**Student will able to**

Course.No	Outcomes
C416.01	Design and Analyze electrical systems in time domain
C416.02	Design and Analyze electrical systems in frequency domain
C416.03	Analyze various transmission lines and perform fault analysis
C416.04	Model Load frequency control of Power Systems
C416.05	Design various Power Electronic Converters and Drives.
C416.06	Analyze the performance of DC Machines and Induction Motors

Course Outcomes:C417 Electrical Workshop**Student will able to**

Course.No	Outcomes
C417.01	Get practical knowledge related to electrical
C417.02	Fabricate basic electrical circuit elements/networks
C417.03	Trouble shoot the electrical circuits
C417.04	Design filter circuit for application
C417.05	Get hardware skills such as soldering, winding etc.
C417.06	Get debugging skills.

Course Outcomes:C418 Industry Oriented Mini Project**Student will able to**

Course.No	Outcomes
C418.01	Design identify basic requirements for a application and propose a cost effective solution
C418.02	Build knowledge through practical assignments and learn the various design methods for solving a problem analysis
C418.03	Develop skill to build design techniques for various problem analysis
C418.04	Summarize the fundamental concepts and techniques used in mini project
C418.05	Make up project enables the student to understand the business process