LORDS INSTITUTE OF ENGINEERING & TECHNOLOGY

Hyderabad-500091, TS.

Department of Electronics and Communication Engineering

COURSE OUTCOMES (COS) ODD SEMESTER

Course Outcomes: C211-Effective Technical Communication in English   Year: III- Sem A.Y: 2020-21

C211.1	Apply technical communication skills effectively
C211.2	Adapt different types of official correspondence
C211.3	Construct report writing using various techniques
C211.4	Develop adequate skills of manual writing
C211.5	Interpret the information transfer from verbal to non-verbal data and vice-versa.

Course Outcomes: C212 – Finance and Accounting   Year: III- Sem   A.Y: 2020-21

C212.1	To understand the basic concepts of financial accounting, cost accounting and management accounting
C212.2	To understand Accounting Standards and their Importance in Global Accounting Environment, to prepare, understand,interpret and analyze financial statements
C212.3	To Understand the procurement of Finance in Financial Markets for Strengthening countries economy
C212.4	To understand Capital budgeting techniques
C212.5	To understand the different types of Ratios like Liquidity, Turn over, Profitability, Leverage and Structural Ratios.

Course Outcomes: C213 Digital Electronics   Year: III- Sem   A.Y: 2020-21

C213.1	Understand the Basics of Digital Electronics and concepts related to Digital Circuits design.
C213.2	Design various logic gates and simplify Boolean Expressions.
C213.3	Realize and analyse the operation of MUX, decoders, adder, subtractor, BCD adder, magnitude comparator circuit.
C213.4	Understand various design of flip flops and to identify and realize sequential circuits using flip-flop.
C213.5	Understand the concepts of programmable logic devices, shift registers, counters, FSM and various memory devices.

Course Outcomes: C214–Probability Theory and Stochastic Process   Year: III- Sem   A.Y: 2020-21

C214.1	Understand different types of Random variables, their density and distribution functions
C214.2	Learn one random variable characteristic functions of different variables using their density functions
C214.3	Interpret the bi-variate distributions and perform the operations on them.
C214.4	Analyse the elementary concepts of the Stochastic Processes in the Temporal domain by studying the characteristics.
C214.5	Analyse the frequency domain information of Stochastic Processes by studying the spectral characteristics.
C214.6	Understand different types of Random variables, their density and distribution functions

Course Outcomes: C215 – Electronic Devices   Year: III- Sem   A.Y: 2020-21

C215.1	Understanding of the characteristic behavior of various electronic devices such as Diodes, etc.
C215.2	Design rectifier circuits with filters Calculate ripple factor, efficiency and percentage regulation of rectifier circuits.
C215.3	Compare and Contrast the characteristics of BJT in various configurations.
C215.4	Distinguish the basics and working principles of FET & MOSFET
C215.5	To acquire knowledge on special purpose devices

Course Outcomes: C216 – Network Theory   **Year: III- Sem   A.Y: 2020-21**

C216.1	Understand the Basics of two port networks with its equivalence & Interconnection of two port networks.
C216.2	Analyse the Symmetrical & Asymmetrical networks by calculating its image and iterative impedances.
C216.3	Study & Design of various filters such as constant - k, m- derived and composite filter.
C216.4	Study & Analyse of various attenuators networks and equalizers.
C216.5	Synthesize the RL & RC networks in Foster and Cauer forms.

Course outcomes: C217 – Electronic Devices Lab   **Year: III- Sem   A.Y: 2020-21**

C217.1	Demonstrate the V-I characteristics of the P-N junction diode and determine forward bias voltage.
C217.2	Draw the characteristics of BJT in different configurations (CB, CE, CC) and identify various regions of operation from the graph.
C217.3	Build the circuit of BJT and FET Common emitter amplifier and determine its various parameters.
C217.4	Construct the BJT amplifier using various biasing techniques and compare using bias stability.
C217.5	Get familiarize with the PSPICE, build any four experiment and simulate.

Course outcomes: C218 – Electronic Workshop   **Year: III- Sem   A.Y: 2020-21**

C218.1	Design of circuits using basic electronic components such as transistors, diodes, switches, relays etc.
C218.2	Understand the various parameters of circuits by applying theorems.
C218.3	Design of combinational circuits using ICs and verify its functionality
C218.4	Implement the circuit for two port networks and measure its characteristics.
C218.5	Get familiarize with the PSPICE, build any four experiment and simulate.

COURSE OUTCOMES (COS)

Course outcomes: C311 – Microprocessor and Microcontroller   Year: III-I Sem   A.Y: 2020-21

C311.1	Visualization of architecture of 8086 microprocessor and recognize different types of addressing modes.
C311.2	Write assembly language programming using 8086 microprocessor instruction set.
C311.3	Familiarizations of different interface peripherals to 8086 microprocessors.
C311.4	Comprehend the architecture of 8051 architecture and capable of assembly/C language programming using 8051 microcontrollers.
C311.5	Handshaking of different peripherals interfaces to 8051 microcontrollers.

Course outcomes: C312 – Data Communication and Computers Networks Year: III-I Sem A.Y: 2020-21

C312.1	Illustrate the working of various network topologies and circuit and packet switching
C312.2	Comprehend the role of data link layers and significance of MAC protocols
C312.3	Relate networking protocols and Internet protocols
C312.4	Obtain transport layer working with TCP, UDP and ATM protocols
C312.5	Comprehend the functionality of application layer and importance of network security.

Course outcomes: C313 – Control Systems   Year: III-I Sem   A.Y: 2020-21

C313.1	Understand mathematical modelling of physical systems using various techniques such as transfer function and block diagram algebra
C313.2	Analyse the response of a system using various time domain techniques.
C313.3	Analyse the stability of the system using various frequency domain techniques such as Bode plot, Polar plot and Nyquist plot.
C313.4	Understand the lead and lag compensators for design of proportional derivative and integral controllers.
C313.5	Interpret the state space analysis and its application for linear discrete time systems.

Course outcomes: C314 – Business Economics & Financial Analysis Year: III-I Sem   A.Y: 2020-21

C314.1	Understand the various Forms of Business and the impact of economic variables on the Business
C314.2	Understand the relationship between demand and supply analysis
C314.3	Understand the concepts of Production, Cost, Market Structures & Pricing strategies used in business firms.
C314.4	Evaluate the firm's financial position by analysing the Financial Statements of a Company
C314.5	Understand the different types of Ratios like Liquidity, Turn over, Profitability, Leverage and Structural Ratios and apply them to analyse the firm position.

Course outcomes: C315 – Computer Organization & Operating System Year: III-I Sem A.Y: 2020-21

C315.1	Understand the basic structure and fundamentals of computer including the register transfer language and micro operations usage.
C315.2	Apply the micro-level operations usage to control different units in a computer
C315.3	Understand the basic concepts of the memory system and Input-Output Organization
C315.4	Understand the overview of operating systems and memory management techniques.
C315.5	Understand the File System Interface and its implementation.

Course outcomes: C316 – Microprocessors & Microcontrollers Lab Year: III-I Sem   A.Y: 2020-21

C316.1	Handling of MASM tool for 8086 microprocessor programming
C316.2	Write assembly language programming using 8086 microprocessor instruction set.
C316.3	Familiarizations of different interface peripherals to 8086 microprocessors.
C316.4	Capable of assembly/C language programming using 8051 microcontrollers.
C316.5	Handshaking of different peripherals interfaces to 8051 microcontrollers.

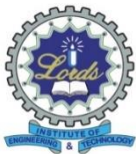**Course outcomes: C317 – Data Communications and Networks Lab Year: III-I Sem   A.Y: 2020-21**

C317.1	Analyse the TCL Script to create two nodes and linksbetween nodes
C317.2	Apply the TCL Script to transmit data between two nodes.
C317.3	Analyse the performance of various LANTopologies.
C317.4	Evaluate the performance of TCP and UDPProtocols and other routing protocols.
C317.5	Understanding the simulation and analysis of different data packets.

Course outcomes: C318 – Advanced Communication Skills Lab   Year: III-I Sem A.Y: 2020-21

C318.1	Acquire vocabulary and use it contextually
C318.2	Listen and speak effectively
C318.3	Develop proficiency in academic reading and writing
C318.4	Developing interview skills by conducting activities on Group Discussion in order to enhance the job prospects.
C318.5	Communicate confidently in formal and informal contexts

Course outcomes: C319 Intellectual Property Rights   Year: III-I Sem A.Y: 2020-21

C319.1	Understand the types of intellectual property, internationalorganizations
C319.2	Understand the concepts of trade Marks, Purpose and function of trademarks, acquisition of trade mark rights
C319.3	Understand the law of copy rights: Fundamental of copy right law, originality of material, rights of reproduction
C319.4	Understand the knowledge of Business Firms Trade Secrets: Trade secrete law, determination of trade secrete status
C319.5	Analyse the international overview on intellectual property, international – trade mark law, copy right law, international patent law, and international development in trade secrets law.

COURSE OUTCOMES (COS)

Course Name: C411 Microwave engineering   **Year: IV-I Sem   A.Y: 2020-21**

C411.1	Analyse completely the rectangular waveguides, their mode characteristics, and design waveguides for solving practical microwave transmission line problems
C411.2	Distinguish between the different types of waveguide and ferrite components, explain their functioning and select proper components for engineering applications.
C411.3	Realize the need for solid state microwave sources, understand the concepts of TEDs, RWH Theory and explain the salient features of Gunn Diodes and ATT Devices.
C411.4	Understand the principle and operation of M type tubes and their applications.
C411.5	Understand the properties of Scattering Matrix, formulate the S-Matrix for various microwave junctions, and understand the utility of S-parameters in microwave component design.

Course Name: C412 Computer Networks   **Year: IV-I Sem   A.Y: 2020-21**

C412.1	Understand the basic computer network technology and different protocols.
C412.2	Distinguish various guided transmission media and understand the error detection and error correction techniques.
C412.3	Understand the concept of different routing techniques for different data communication networks
C412.4	Understand the working phenomena of transport layer and application layer with its applications.
C412.5	Understand the concepts of network security, Mobile and ad hoc networks.

Course Name: C413 Electronics Measurements and Instrumentation   **Year: IV-I Sem   A.Y: 2020-21**

C413.1	Identify the various electronic instruments based on their specifications for carrying out a particular task of measurement.
C413.2	Understand the usage of various types of signal generators, signal analysers for generating and analysing various real-time signals.
C413.3	Understanding the basic features of oscilloscope and its internal structures and different types of oscilloscopes
C413.4	Understand the measurement of various physical parameters by appropriately selecting the transducers.
C413.5	Understand the use of various measuring techniques for measurement of different physical parameters using different classes of transducers.

Course Name: C414 Wireless Communication Networks   **Year: IV-I Sem   A.Y: 2020 -21**

C414.1	Understand the basic concept of wirelesscommunication and its evolution of basic cellular system.
C414.2	Understand the GSM techniques & its architecture.
C414.3	Analyze various multiple access schemes used in wireless communication.
C414.4	Demonstrate wireless local area networks and their specifications.
C414.5	Familiarize with some of the existing and emerging wireless standards

Course Name: C415 VLSI Design **Year: IV-I Sem   A.Y: 2020-21**

C416.1	Acquire qualitative knowledge about the fabrication process of integrated circuits using MOS transistors.
C416.2	Draw the layout of any logic circuit which helps to understand and estimate parasitic effect of any logic circuit.
C416.3	Design building blocks of data path systems, memories and simple logic circuits using PLA, PAL, FPGA and CPLD.
C416.4	Understand concepts required to design building blocks of data path subsystem using gates.
C416.5	Understand different types of faults that can occur in a system and learn the concept of testing and adding extra hardware to improve testability of system.

Course Name: C416 VLSI & E-CAD Lab **Year: IV-I Sem   A.Y: 2020-21**

C417.1	Understand the fundamentals of VLSI design and electronic computer-aided design tools.
C417.2	Design and simulate digital circuits using VLSI CAD tools.
C417.3	Analyze and optimize digital circuits for timing performance.
C417.4	Implement digital circuits using Field Programmable Gate Arrays (FPGAs).
C417.5	Demonstrate proficiency in using EDA (Electronic Design Automation) tools for layout and verification.

Course Name: C417 Microwave Engineering Lab **Year: IV-I Sem   A.Y: 2020-21**

C418.1	Study and Verify the characteristics of Reflex Klystron, Gunn diode and directional coupler.
C418.2	Understand the measurement of VSWR for different loads.
C418.3	Analyse the characteristics of the waveguide parameters and its measurement techniques.
C418.4	Understand the Measurement of Scattering Parameters of different microwave components.
C418.5	Understand the measurement of microwave frequency, attenuation and radiation pattern.

Course Name: C418 Industry Oriented Mini Project **Year: IV-I Sem   A.Y: 2020-21**

C419.1	Understand the technical aspects within the chosen area of technology for project development.
C419.2	Identify, discuss and justify the technical aspects of the chosen project with a comprehensive and systematic approach.
C419.3	Reproduce, improve and refine the technical aspects for engineering projects.
C419.4	Design the basic requirements for the proposed idea implementation for cost effective solution.
C419.5	Communicate and report effectively project related activities and findings.

Course Name: C419 Seminar **Year: IV-I Sem   A.Y: 2020-21**

C419.1	Engaged in the integral activities of reading, discussion and composition around a particular topic.
C419.2	Inculcate presentation skills for the overall personality development.
C419.3	Enhance the confidence level of individual to face the interviews.
C419.4	Acquire the knowledge in the core domain area.
C419.5	Distinguish opinions from researched claims through discussion.