LORDS INSTITUTE OF ENGINEERING & TECHNOLOGY

Himayath Sagar - 500 091, Hyderabad.

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

COURSE OUTCOMES (COs)

Course Name: C211 Effective Technical Communication in English Year: II-I SemA.Y: 2021-22

C211.1	Apply technical communication skills effectively
C211.2	Adapt different types of official correspondenc
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 Name: C212 Finance and Accounting Year: II-I Sem A.Y: 2021-22

C212.1	Evaluate the financial performance of the business unit.
C212.2	Take decisions on selection of projects.
C212.3	Compute the procurement of finances.
C212.4	Analyze the liquidity, solvency and profitability of the business unit.
C212.5	Evaluate the overall financial functioning of an enterprise.

Course Name: C213 Digital Electronics Year: II-I Sem A.Y: 2021-22

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 Name: C214 ProbabilityTheory and Stochastic Process Year: II-I Sem A.Y: 2021-22

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.

Course Name: C215 Electronic Devices and Circuits Year: II-I Sem A.Y: 2021-22

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 Name: C216 Network Theory **Year: II-I Sem A.Y: 2021-22**

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 Name: C217 Electronic Devices and Circuits Lab **Year: II-I Sem A.Y: 2021-22**

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 Name: C218 Electronic Workshop Lab **Year: II-I Sem A.Y: 2021-22**

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.

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

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COURSE OUTCOMES (COs)

Course Name: C311 Analog Communication **Year: III-I Sem A.Y: 2021-22**

C311.1	Understand analog communication system
C311.2	Compare and analyze analog modulation techniques
C311.3	Calculate noise performance of analog modulation techniques
C311.4	Design AM and FM receivers
C311.5	Differentiate between pulse modulation techniques & continuous modulation techniques

Course Name: C312 Digital Signal Processing **Year: III-I Sem A.Y: 2021-22**

C312.1	Evaluate Discrete Fourier transform(DFT) and Fast Fourier Transform (FFT) algorithms.
C312.2	Design Digital IIR & FIR filters from Analog filters using various techniques
C312.3	Demonstrate the impacts of finite word length effects in filter design.
C312.4	Implementation of multirate DSP
C312.5	Understand the fundamental of advance DSP processors and features

Course Name: C313 Automatic Control Systems **Year: III-I Sem A.Y: 2021-22**

C313.1	Classify the control systems and analyse the system transfer function using different techniques such as block diagram & signal flow graph.
C313.2	Examine the stability of the system using time domain techniques such as R-H and Root locus techniques
C313.3	Analyze the compensation techniques and frequency domain specifications by using bode plot, nyquist plot in order to determine the stability of a system.
C313.4	Understand the digital control system and analyse it in discrete time domain.
C313.5	Analyze a control system using state space representation & determining the controllability and observability of systems.

Course Name: C314 Antennas and wave Propagation **Year: III-I Sem A.Y: 2021-22**

C314.1	Characterize the antennas based on frequency, configure the geometry and establish the basic antenna parameters.
C314.2	Analyze the construction & working of different types of wire antennas
C314.3	Design the various types of HF, VHF & UHF Antennas-1
C314.4	Analyze and design different types of HF, VHF & UHF Antennas-2
C314.5	Various modes of radio wave propagation are used for different applications.

Course Name: C315 Microprocessor &Microcontroller **Year: III-I Sem A.Y: 2021-22**

C315.1	Visualization of architecture of 8086 microprocessor and recognize different types of addressing modes.
C315.2	Write assembly language programming using 8086 microprocessor instruction set.
C315.3	Familiarizations of different interface peripherals to 8086 microprocessors.
C315.4	Comprehend the architecture of 8051 architecture and capable of assembly/C language programming using 8051 microcontrollers.
C315.5	Handshaking of different peripherals interfaces to 8051 microcontrollers.

Course Name: C316 Systems and Signal ProcessingLab **Year: III-I Sem A.Y: 2021-22**

C316.1	Illustrate various signal processing algorithms.
C316.2	Analyze FIR Filter with specific magnitude and phase requirements.
C316.3	Analyze IIR Filter with specific magnitude and phase requirements.
C316.4	Illustrate the basics of Multirate signal processing
C316.5	Analyze digital filters on DSP processors.

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COURSE OUTCOMES (COs)

Course Name: C411 Microwave and Optical Communication Year: IV-I Sem A.Y: 2021-22

C411.1	Realise power generation at microwave frequencies and derive the performance characteristics
C411.2	Realize the need for solid-state microwave sources and understand the principles of solid-state devices.
C411.3	understand the utility of S-parameters in microwave component design and learn the measurement procedure of various microwave parameters.
C411.4	Utility of S-parameters in microwave component design and learn the measurement procedure of various microwave parameters.
C411.5	Analysis of the mechanism of light propagation through Optical Fibres.

Course Name: C412 Digital Image Processing Year: IV-I Sem A.Y: 2021-22

C412.1	Explore the fundamental relations between pixels and utility of 2-D transforms in image processing.
C412.2	Understand the Image enhancement in spatial domain and frequency domain using different processing techniques
C412.3	Interpret the process of Image segmentation and restoration using different methods.
C412.4	Implement the various Morphological operations on an image
C412.5	Overview on the need of compression and evaluation of basic compression algorithms.

Course Name: C413 Database Management Systems Year: IV-I Sem A.Y: 2021-22

C413.1	Explain & demonstrate the basic elements of a relation database management system
C413.2	Design Components to explain the difference between traditional file system and DBMS..
C413.3	Identify to deal with different Data Base languages.
C413.4	Analyze the different data models for Data Base. Understand types of Data Base failures and Recovery.
C413.5	Able to Design data base and normalize data and write queries mathematically processed & executed.

Course Name: C414 Basic Mechanical Engineering Year: IV-I Sem A.Y: 2021-22

C414.1	Understand the basic concepts of Newton law of cooling and Boltzmann Constant for Heat Transfer.
C414.2	Understand the concepts of Lubrication Systems and the Lubricating Oils used in the engines during working.
C414.3	Remembering the concepts of gearing mechanisms and the advantages and Limitations in gearing process.
C414.4	Analyzing the failures of Kinematics in the machines and the real time applications during the working mechanisms.
C414.5	Analyzing the concepts of Compressors and the failures intended during the working of compressors.

Course Name: C415 Professional, Practice, Law and Ethics Year: IV-I Sem A.Y: 2021-22

C415.1	Deliver the importance of professional practice, Law and Ethics in their personal lives and professional careers.
C415.2	Familiarize with the rights and responsibilities as an employee, team member and a global citizen.
C415.3	Explore the options for resorting to judicial proceedings and the associated costs.
C415.4	Enhance problem-solving skills related to labor-related issues and legal compliance in the construction industry.
C415.5	Demonstrate the study of different Laws and Acts

Course Name: C415 Microwave and Optical Communication LabYear: IV-I Sem A.Y: 2021-22

C416.1	Verify characteristics of Reflex Klystron
C416.2	Analyse various parameters of Waveguide Components
C416.3	Estimate the power measurements of RF Components such as directional couplers
C416.4	Demonstrate characteristics of various optical sources.
C416.5	Measure data Rate, Numerical Aperture, and Losses in Optical Link

Course Name: C416 Industrial oriented mini–Project Year: IV-I Sem A.Y: 2021-22

C417.1	Acquired knowledge within the chosen area of technology for project development.
C417.2	dentify, discuss and justify the technical aspects of the chosen project with a comprehensive and systematic approach.
C417.3	Reproduce, improve and refine technical aspects for engineering projects.
C417.4	Work as an individual or in a team in development of technical projects.
C417.5	Communicate and report effectively project related activities and findings

Course Name: C417 Seminar Year: IV-I Sem A.Y: 2021-22

C418.1	The student will be engaged in the integral activities of reading, discussion and composition around a particular topic
C418.2	The student will develop presentation skills.
C418.3	The student will gain confidence to face the interviews.
C418.4	The student will be able to investigate the advancements in the particular topic.
C418.5	The student will be able to distinguish opinions from researched claims.

Course Name: C418 Project Phase- I Year: IV-I Sem A.Y: 2021-22

C419.1	The student gains knowledge on the basic concepts of Electronics and communication engineering and learn the implementation.
C419.2	The student understands the design and analysis of particular problems in project.
C419.3	The students learn MATLAB programming and implementing the Simulink.
C419.4	The student will be able to develop the hardware.
C419.5	The student will learn the complete process of a project – designing, programming, module development.