LORDS INSTITUTE OF ENGINEERING & TECHNOLOGY

Hyderabad-500091, TS.

Department of Electronics and Communication Engineering

.

COURSE OUTCOMES (COS)

Course Outcomes: C211-M-III Probability and StatisticsYear: II-IIIII Sem A.Y: 2023-24

C211.1	To determine Probability, Random variables, distributions and its application
C211.2	Apply the knowledge of some standard discrete probability distributions and moments.
C211.3	Calculate parameters of standard continuous probability distributions.
C211.4	Find the parameters and concepts of correlation, regression and obtain the knowledge of sampling theory.
C211.5	Analyze and check the validity of statement using testing of hypothesis of various parameters and goodness of fit.

Course Outcomes: C212 – English for Technical Communication Year: II-III Sem A.Y: 2023-24

C212.1	Apply technical communication skills effectively
C212.2	Adapt different types of official correspondence
C212.3	Construct report writing using various techniques
C212.4	Develop adequate skills of manual writing
C212.5	Interpret the information transfer from verbal to non-verbal data and vice-versa.

Course Outcomes: C213 Electronics Devices Year: II-III Sem A.Y: 2023-24

C213.1	Understanding of the characteristic behavior of various electronic devices such as Diodes, etc.
C213.2	Design rectifier circuits with filters Calculate ripple factor, efficiency and percentage regulation of rectifier circuits.
C213.3	Compare and Contrast the characteristics of BJT in various configurations.
C213.4	Distinguish the basics and working principles of FET & MOSFET
C213.5	To acquire knowledge on special purpose devices

Course Outcomes: C214– Signals and Systems Year: II-III Sem A.Y: 2023-24

C214.1	Understand mathematical description and representation of continuous and discrete time signals and systems.
C214.2	Derive Fourier series for continuous time signals and can find Fourier transform for different signals.
C214.3	Develop input output relationship for linear shift invariant system and understand the convolution operator for continuous and discrete time system
C214.4	Classify systems based on their properties and determine the response of LTI system using convolution.
C214.5	Apply the Laplace transform and Z- transform for analyze of continuous-time and discrete-time signals and systems.

Course Outcomes: C215 – Network Theory Year: II-III Sem A.Y: 2023-24

C215.1	Understand the Basics of two port networks with its equivalence & Interconnection of two port networks.
C215.2	Analyse the Symmetrical & Asymmetrical networks by calculating its image and iterative impedances.
C215.3	Study & Design of various filters such as constant - k, m- derived and composite filter.
C215.4	Study &Analyse of various attenuators networks and equalizers.
C215.5	Synthesize the RL & RC networks in Foster and Cauer forms.

Course Outcomes: C216 –Advanced Communication Skills Lab Year: II-III Sem A.Y: 2023-24

C216.1	Acquire vocabulary and use it contextually
C216.2	Listen and speak effectively
C216.3	Develop proficiency in academic reading and writing
C216.4	Developing interview skills by conducting activities on Group Discussion in order to enhance the job prospects.
C216.5	Communicate confidently in formal and informal contexts

Course outcomes: C217 – Electronic Devices Lab Year: II-III Sem A.Y: 2023-24

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 – Basic Simulation Lab Year: II-III Sem A.Y: 2023-24

C218.1	Understand the generation of different signals and performing various operations on them.
C218.2	Perform convolution and correlation operations on different signals and sequences.
C218.3	Verification of Linearity and Time Invariance Properties of a given Continuous/Discrete System.
C218.4	Analyse the spectrum and converting various time domain signals in to frequency domain using different techniques.
C218.5	Generation of Gaussian noise and studying the noise effects for different random processes.

Course outcomes: C219 – Python Programming Lab -1 Year: II-III Sem A.Y: 2023-24

C219.1	Learn to write test and debug simple python programs.
C219.2	Implement programs with conditionals and loops
C219.3	Develop Python programs step wise by defining functions and calling them.
C219.4	Use Python Lists, Dictionaries, tuples and Regular expressions in Python.
C219.5	Learn to read and write from/to files in Python

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COURSE OUTCOMES (COS)

Course outcomes: C311 – Business Economics & Financial Analysis Year: III-V Sem A.Y: 2023-24

C311.1	Apply the concepts of Business and Economics during his professional and personal life
C311.2	Understand the elasticity of the demand of the product, different types, and measurement of elasticity of demand, factors influencing the elasticity of demand
C311.3	Recongnize the production function, features of Iso-Quants and Iso-Costs, different types of internal economics, external economics, and law of returns with appropriate examples
C311.4	Prepare financial statements of the firm
C311.5	Analyse the financial statements using ratio analysis and cash flow techniques

Course outcomes: C312 – Microprocessor and Microcontroller Year: III-III Sem A.Y: 2023-24

C312.1	Describe architecture and signal description of 8086 with simple program
C312.2	Analyze architecture and instruction of 8051 with simple program
C312.3	Describe Input output and memory interface performance
C312.4	Analyze the communication bus interface concept
C312.5	Demonstrate arm architecture and its instruction set

Course outcomes: C313 – Digital Communication Year: III-V Sem A.Y: 2023-24

C313.1	Comprehend the different types of digital modulation techniques ,PCM, DPCM, DM and ADM.
C313.2	Illustrate the classification of channels and source coding methods
C313.3	Distinguish different types of error control codes along with their encoding/decoding algorithm.
C313.4	Analyze the different Digital Carrier Modulation schemes of coherent and Non coherent type based on probability or error
C313.5	Generation of PN sequence using special spectrum and characterize the Acquisition schemes for receivers to the track signals.

Course outcomes: C314 –Control Systems Year: III-V Sem A.Y: 2023-24

C314.1	Interpret the concept of the terms control systems, feedback, Mathematical modelling of Electrical and Mechanical systems.
C314.2	Analyse the time domain and frequency response analysis of control systems using different methods.
C314.3	Acquire the knowledge of various analytical techniques used to determine the stability of control systems.
C314.4	Analyse the stability of an LTI system using frequency domain techniques and understand the importance of design of compensators.
C314.5	Demonstrate controllability and observability of modern control systems.

Course outcomes: C315 – Electronic Measurement & Instrumentation Year: III-V Sem

A.Y: 2023-24

C315.1	Implement the standards of measurement & its applications for measurement, & its application for measurement of various physical parameters.
C315.2	Illustrate the different types of transducers & bridges
C315.3	Demonstrate the characteristics of electronic sensors & signal analyser
C315.4	Analyse the different oscilloscopes working & its application
C315.5	Analyse the usage of biomedical instrumentation in daily life

Course outcomes: C316 – Disaster Preparedness and management Year: III-V Sem A.Y: 2023-24

C316.1	Apply the concept of disaster management to evaluate a disaster situation.
C316.2	Classify the various categories of disasters and their specific characteristics.
C316.3	Select appropriate pre disaster, during disaster and post disaster measures and framework.
C316.4	Apply the geo informatics technology in disaster situation.
C316.5	Identify the disaster management acts and framework specific to India relevant to a situation.

Course outcomes: C317 – Microprocessor and Microcontroller Lab Year: III-V Sem A.Y: 2023-24

C317.1	Handling of MASM tool for 8086 microprocessor programming
C317.2	Write assembly language programming using 8086 microprocessor instruction set.
C317.3	Familiarizations of different interface peripherals to 8086 microprocessors.
C317.4	Capable of assembly/C language programming using 8051 microcontrollers.
C317.5	Handshaking of different peripherals interfaces to 8051 microcontrollers.

Course outcomes: C318 –Analog and Digital Communications Lab Year III-V Sem A.Y: 2023-24

C318.1	Capable of simulation for modulation and demodulation of AM and FM
C318.2	Analyzation of pre-emphasis and de-emphasis at the transmitter and receiver Respectively
C318.3	Realize and simulation of the PAM, PWM &PPM circuits
C318.4	Comprehend the baseband transmission (i.e., PCM, DPCM, DM, and ADM)
C318.5	Analyze the error detection and correction

Course outcomes: C319- Summer Internship Year: III-V Sem A.Y: 2023-24

C319.1	Construct the company profile by compiling the brief history, management structure, products / services offered, key achievements and market performance for his / her organization of internship.
C319.2	Determine the challenges and future potential for his / her internship organization in particular and the sector in general.
C319.3	Test the theoretical learning in practical situations by accomplishing the tasks assigned during the internship period.
C319.4	Analyze the functioning of internship organization and recommend changes for improvement in processes
C319.5	Construct the company profile by compiling the brief history, management structure, products / services offered, key achievements and market performance for his / her organization of internship.

Course outcomes: C3110 - Aptitude and Reasoning Year: III-V Sem A.Y: 2023-24

C3110.1	Acquire the grasp of Data analysis and its interpretation through percentages and measures of central tendency.
C3110.2	Calculate the problems pertaining to number series and reasoning ability.
C3110.3	Analyze the number system pattern and determine profit and losses.
C3110.4	Evaluate proportions and tackle time framework situations
C3110.5	Understand and apply combinatorics, clock-calendar concepts and geometry of plane and solid figures.

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COURSE OUTCOMES (COS)

Course Name: C411 Microwave Theory and Techniques Year: IV-VII Sem A.Y: 2023-24

C411.1	Analyze 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 Satellite Communication Year: IV-VII Sem A.Y: 2023-24

C412.1	Illustrate the basic orbital satellite operations.
C412.2	Illustrate the orbital perturbations, launch vehicles and orbital effects on satellite communication systems.
C412.3	Understand various components in satellite systems.
C412.4	Analyse and design satellite space communication link.
C412.5	Understand the operating principle of Direct Broadcast Satellite TV, Radio and satellite mobile services.

Course Name: C413 Cellular and Mobile Communication Year: IV-VII Sem A.Y: 2023-24

C413.1	Demonstrate basic concepts and operation of Basic Cellular System.
C413.2	Understand the concept and implementation of frequency reuse and Handoff techniques and to analyze interference and capacity enhancement
C413.3	Illustrate and understand the methods of electromagnetic wave propagation in cellular communication. The evaluation of the electromagnetic energy reaching the mobile unit.
C413.4	Analyse various multiple access protocols based on their merits and demerits and to explain features, authentication, operational details of GSM and CDMA mobile cellular systems along with data frame structure details.
C413.5	Understand the development and limitation of the preliminary and advanced generation of mobile systems and the present trends in Cellular communications and the future communication requirements.

Course Name: C414 Green Building Technology Year: IV-VII Sem A.Y: 2023-24

C414.1	Define a green building, along with its features, benefits and rating systems
C414.2	Describe the criteria used for site selection and water efficiency methods
C414.3	Explain the energy efficiency terms and methods used in green building practices
C414.4	Select materials for sustainable built environment & adopt waste management methods.
C414.5	Describe the methods used to maintain indoor environmental quality.

Course Name: C415 Embeeded Systems and IoT application Lab Year: IV-VII Sem A.Y: 2023-24

C415.1	Understand the usage of IDE tools
C415.2	Develop interfacing applications like display devices and input devices using ARM Processor
C415.3	Develop program using ARM processor to read the sensor values and display them
C415.4	Develop the IoT applications using Arduino/Raspberry Pi
C415.5	Utilize the thing speak cloud to display the sensor values

Course Name: C416 Microwave Lab **Year: IV-VII Sem A.Y: 2023-24**

C41.61	Study and Verify the characteristics of Reflex Klystron, Gunn diode and directional coupler.
C41.62	Understand the measurement of VSWR for different loads.
C416.3	Analyze the characteristics of the waveguide parameters and its measurement techniques.
C416.4	Understand the Measurement of Scattering Parameters of different microwave components.
C416.5	Understand the measurement of microwave frequency, attenuation and radiation pattern.

Course Name: C417 Summer Internship **Year: IV-VII Sem A.Y: 2023-24**

C417.1	Construct the company profile by compiling the brief history, management structure, products / services offered, key achievements and market performance for his / her organization of internship.
C417.2	Determine the challenges and future potential for his / her internship organization in particular and the sector in general.
C417.3	Test the theoretical learning in practical situations by accomplishing the tasks assigned during the internship period.
C417.4	Analyze the functioning of internship organization and recommend changes for improvement in processes
C417.5	Construct the company profile by compiling the brief history, management structure, products / services offered, key achievements and market performance for his / her organization of internship.

Course Name: C418 Project Phase 1 **Year: IV-VII Sem A.Y: 2023-24**

C418.1	The student gains knowledge on the basic concepts of electrical engineering and learn the implementation.
C418.2	The student understands the design and analysis of particular problems in project.
C418.3	The students learn MATLAB programming and implementing the Simulink.
C418.4	The student will be able to develop the hardware.
C418.5	The student will learn the complete process of a project – designing, programming, module development.