



COURSE OUTCOMES (COS)

EVEN SEMESTER

Course Outcomes: C221– Signals and Systems

Year: IV- Sem

A.Y: 2020-21

C221.1	Understand mathematical description and representation of continuous and discrete time signals and systems.
C221.2	Derive Fourier series for continuous time signals and can find Fourier transform for different signals.
C221.3	Develop input output relationship for linear shift invariant system and understand the convolution operator for continuous and discrete time system
C221.4	Classify systems based on their properties and determine the response of LTI system using convolution.
C221.5	Apply the Laplace transform and Z- transform for analyze of continuous-time and discrete-time signals and systems.

Course Outcomes: C222– ANALOG ELECTRONIC CIRCUITS

Year: IV- Sem

A.Y: 2020-21

C222.1	Categorize low frequency, mid frequency and high frequency response of small signal single stage and Multistage RC coupled and Transformer Amplifiers using BJT and FET.
C222.2	Analyse and design of negative feedback amplifiers.
C222.3	Illustrate the operation of Audio Frequency and Radio Frequency oscillators
C222.4	Classification of Power Amplifiers and their design considerations
C222.5	Evaluate the performance of single and double tuned amplifiers

Course Outcomes: C223– Electromagnetic Theory and Transmission Lines

Year: IV- Sem

A.Y: 2020-21

C223.1	Understand the different coordinate systems, vector calculus, coulombs law and gauss law for finding electric fields due to different charges and to formulate the capacitance for different capacitors.
C223.2	Learn basic magneto-statics concepts and laws such as Biot-Savarts law and Amperes law, their application in finding magnetic field intensity, inductance and magnetic boundary conditions.
C223.3	Distinguish between the static and time-varying fields, establish the corresponding sets of Maxwell's Equations and Boundary Conditions, and use them for solving engineering problems.
C223.4	Determine the Transmission Line parameters to characterize the distortions and estimate the characteristics for different lines.
C223.5	Study the Smith Chart profile and stub matching features, and gain ability to practically use the same for solving practical problems.

Course Outcomes: C224– Pulse and Digital Circuits

Year: IV- Sem

A.Y: 2020-21

C224.1	Analyse the Low Pass and High Pass Filters for various standard inputs
C224.2	Study the Applications of Diodes as Clippers and Clamper Circuits.
C224.3	Ability to Analyse and Design Multivibrators and Sweep Circuits for Various Applications
C224.4	Study the applications of sampling gates Using Diodes and Transistors
C224.5	Ability to Realize Logic families Using Diodes and Transistors

Course Outcomes: C225– Computer Organization and Architecture

Year: IV- Sem

A.Y: 2020-21

C225.1	Evaluate mathematical operation on fixed and floating point digital data.
C225.2	Understand the basic structure and operation of Digital Computer.
C225.3	Understand the Internal operation and types of processing of instructions of Digital Computer.
C225.4	Understand input output organization and input output interfacing of a computer.
C225.5	Analyse hierarchical memory system and understand memory management and mapping function techniques.

Course Outcomes: C226– Human Values And Professional Ethics Year: IV- Sem A.Y: 2020-21

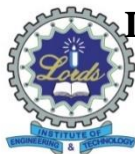
C226.1	Develop the ability to understand distinguish between what is ofvalue and what is superficial in life.
C226.2	Develop the ability to analyze and to face difficult situations in life boldly and resolve them confidently.
C226.3	Create awareness on assessment of safety and risk
C226.4	Demonstrate knowledge of ethical values in non-classroom activities, such as service learning, internships, and field work integrate, synthesize, and apply knowledge of ethical dilemmas resolutions in academic settings, including focused and interdisciplinary research
C226.5	Understand the harmony of professional ethics

Course Outcomes: C227– ANALOG ELECTRONIC CIRCUITS LAB Year: IV- Sem A.Y: 2020-21

C227.1	Study& Analysis of gain and bandwidth of BJT, FET Amplifiers.
C227.2	Design & Analysis of feedback Amplifiers.
C227.3	Study& Verify the operation of RC& LC Oscillators.
C227.4	Demonstrate the Performance of power amplifier and filter Circuits
C227.5	Understand the operation of tuned amplifiers and voltage regulators.

Course Outcomes: C228 – Pulse and Digital Circuits Lab Year: IV- Sem A.Y: 2020-21

C228.1	Design and analyze linear and non-linear wave shaping circuits.
C228.2	Study and verify the operation of transistor switching time
C228.3	Demonstrate the operation of multivibrators using transistors
C228.4	Understand the functionality of sweep circuits and sampling gates
C228.5	Ability to verify characteristics of TTL & CMOS circuits



COURSE OUTCOMES (COS)

Course Name: C321 ANTENNAS AND PROPAGATION Year: III-II Sem A.Y: 2020-21

C321.1	Understand the different characteristics of an antenna and determine radiation field patterns of it.
C321.2	Analyse radiation field characteristics of $\lambda/2$ dipole antenna, $\lambda/4$ monopole antenna, and different antenna arrays and demonstrate the characteristics of end fire, broad side and phased array antennas
C321.3	Demonstrate the working principle of different antennas and their applications.
C321.4	Demonstrate the working principle, design and applications of various horn and reflector antennas.
C321.5	Illustrate the various methods of radio wave propagation and explain different propagation parameters/terms such as virtual height, critical frequency, maximum usable frequency (MUF), skip distance.

Course Name: C322 Digital Signal Processing Year: III-II Sem A.Y: 2020-21

C322.1	Understand the LTI system characteristics and Multirate signal processing.
C322.2	Understand the inter-relationship between DFT and various transforms.
C322.3	Design of a digital IIR filter for a given specifications using different techniques.
C322.4	Design of a digital FIR filter for a given specifications using different techniques.
C322.5	Understand the significance of various filter structures and effects of round off errors

Course Name: C323 VLSI Design Year: III-II Sem A.Y: 2020-21

C323.1	Acquire qualitative knowledge about the fabrication process of integrated circuits using MOS transistors.
C323.2	Draw the layout of any logic circuit which helps to understand and estimate parasitic effect of any logic circuit.
C323.3	Design building blocks of data path systems using different combinational circuit elements.
C323.4	Understand the array sub system using memories and simple logic circuits using PLA, PAL, FPGA and CPLD.
C323.5	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: C324 Mobile Communication Network Year: III-II Sem A.Y: 2020-21

C324.1	Understand the evolution of cellular and mobile communication system.
C324.2	Understand co-channel and non-co-channel interferences
C324.3	Familiarize with cell coverage for signal and traffic, diversity techniques, frequency management, Channel assignment strategies.
C324.4	Understand the process of Handoffs and Dropped Calls handling by cellular network
C324.5	Apply the knowledge of plasma application in manufacturing industries and understand the principle of chemical machining.

Course Name: C325 RENEWABLE ENERGY SOURCES Year: III-II Sem A.Y: 2020-21

C325.1	Understand the principle of wind and solar photovoltaic powergeneration, fuel cells
C325.2	Analyse the cost for generation of conventionaland Renewable energy plants
C325.3	Design suitable controller for wind and solarapplications
C325.4	A nalyse the issues involved in the integration ofrenewable energy sources to the grid
C325.5	Understand the advantages and disadvantages involved in renewable energy sources.

Course Name: C326 Digital Signal Processing Lab Year: III-II Sem A.Y: 2020-21

C326.1	Understand to calculate and plot DFT/IDFT of given DT signal.
C326.2	Apply the technique to find the Impulse Response and Frequency Response of a given system.
C326.3	Implement FFT of given sequence and identify the reduction ofcomputations using FFT.
C326.4	Implement Low Pass FIR filter and High Pass IIR filter for a given sequence andcalculate the filter coefficients.
C326.5	Understand the Decimation process and Interpolation process and vary the sampling rate.

Course Name: C327 E-CAD Lab Year: III-II Sem A.Y: 2020-21

C327.1	Understand the fundamentals of VLSI design and electronic computer-aided design tools.
C327.2	Design and simulate digital circuits using VLSI CAD tools.
C327.3	Analyze and optimize digital circuits for timing performance.
C327.4	Implement digital circuits using Field Programmable Gate Arrays (FPGAs).
C327.5	Demonstrate proficiency in using EDA (Electronic Design Automation) tools for layout and verification.

Course Name: C328 SCRIPTING LANGUAGES LAB Year: III-II Sem A.Y: 2020-21

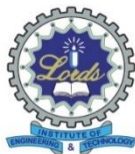
C328.1	Ability to Perl script to substitute a word, with another word in a string.
C328.2	Analysis of script to create a new string which is n copies of a given string where n is a nonnegative integer.
C328.3	Ability to gain some fluency programming in Ruby, Perl, TCL.
C328.4	Analysis of a TCL script for Sorting a list using a comparison function.
C328.5	Analysis to understand the differences between Scripting languagesand programming languages.

Course Name: C329 Advanced Communication Skills Lab Year: III-II Sem A.Y: 2020-21

C329.1	Acquire vocabulary and use it contextually
C329.2	Listen and speak effectively
C329.3	Develop proficiency in academic reading and writing
C329.4	Increase possibilities of job prospects
C329.5	Communicate confidently in formal and informal contexts

Course Name: C3210 Environmental Science Year: III-II Sem A.Y: 2020-21

C3210.1	Understand the scientific background behind the terrestrial phenomenon which explains how we as human beings fit into that.
C3210.2	Identify the environmental problems as well as the risks associated with these problems and understand what it is to be a steward in the environment and how to live their lives in a better manner
C3210.3	Scientific background needed to analyse biodiversity and itsconversion.
C3210.4	Evaluate the cause of Environmental Pollution and Control Technology methods.
C3210.5	Analyse the importance of ecosystem and know the present resources and different techniques involved in its conservation



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Course Name: C421 ORGANIZATIONAL BEHAVIOUR Year: IV-II Sem A.Y: 2020-21

C421.1	Analyze the behavior of individuals and groups in organizations in terms of the key factors that influence organizational behavior.
C421.2	Assess the potential effects of organizational level factors (such as structure, culture and change) on organizational behavior.
C421.3	Critically evaluate the potential effects of important developments in the external environment (such as globalization and advances in technology) on organizational behavior.
C421.4	Understand the organizational behavioral issues in the context of organizational behavior theories, models and concepts.
C421.5	Understand the behavioral performance management techniques in order to leading high performance.

Course Name: C422 OPTICAL COMMUNICATION Year: IV-II Sem A.Y: 2020-21

C422.1	Understand and analyze the constructional parameters of optical fibers.
C422.2	Understand the Signal Distortion in Optical Fibers and ascertain the losses
C422.3	Understand the various optical sources and its power launching techniques.
C422.4	Compare various optical detectors and choose suitable one for different applications.
C422.5	Understand the design of optical systems and WDM.

Course Name: C423 GLOBAL POSITIONING SYSTEM Year: IV-II Sem A.Y: 2020-22

C423.1	Understand the GPS Architecture and its applications.
C423.2	Interpret the navigational message and signals received by the GPS receiver.
C423.3	Identify error sources in GPS observations and mitigate them.
C423.4	Apply the corrections for accurate positioning and to Map the geospatial features.
C423.5	Understand the GPS applications in real time world.

Course Name: C424 Major Project Year: IV-II Sem A.Y: 2020-22

C424.1	Classify the projects and describe the phases involved in project formulation with feasibility studies and SWOT (strengths, weaknesses, opportunities, and threats) analysis.
C424.2	Devise a projects development cycle and get acquainted with the different appraisals in the process of deciding the worthiness of project.
C424.3	Exhibit and apply the managerial skills and knowledge of financial aspects required during the implementation of project.
C424.4	Identify sources for project finance and select the method of project implementation which is best suited for a particular project.

