LORDS INSTITUTE OF ENGINEERING & TECHNOLOGY
Department of Information Technology

Course Outcomes

Student will be able to

CO. No.	Description
Course Outcomes: C31 English for Technical Communication (U21EN301)	
C31.1	Apply technical communication skills effectively
C31.2	Adapt different types of official correspondence
C31.3	Construct report writing using various techniques
C31.4	Develop adequate skills of manual writing
C31.5	Interpret the information transfer from verbal to non-verbal data and vice-versa
CO. No.	**Description**
Course Outcomes: C32 – Digital Logic Design (U21EC305)	
C32.1	Demonstrate the number system conversions and simplify Boolean functions
C32.2	Analyze and simplify Boolean expressions using Karnaugh-maps and tabulation method.
C32.3	Design and analyze combinational circuits.
C32.4	Design Sequential circuits.
C32.5	Design and Analyze Counters and Finite State Machines
CO. No.	**Description**
Course Outcomes: C33 – Mathematics-III(Probability and Statistics) (U21MA301)	
C33.1	Determine Probability, Random variables, distributions and its application
C33.2	Apply the knowledge of standard discrete probability distributions and Moments
C33.3	Calculate parameters of standard continuous probability distributions.
C33.4	Find the parameters and concepts of correlation, regression and obtain the knowledge of sampling Theory with context to test of hypothesis
C33.5	Analyze and check the validity of statement using testing of hypothesis for parameters and goodness of fit.
CO. No.	**Description**
Course Outcomes: C34 – Data Structures (U21CS302)	
C34.1	Classify data structures & algorithms and work with performance analysis.
C34.2	Develop stack and Queue ADT and work on their applications.
C34.3	Work with SLL and DLL and implement real world applications.
C34.4	Analyze and implement Searching, Sorting and Hashing Techniques.
C34.5	Create non-linear data structures and analyze traversal techniques of trees and graphs

CO. No.	Description
Course Outcomes: C35 – Python Programming (U21CM301)	
C35.1	Develop essential programming skills in python programming concepts.
C35.2	Apply the knowledge of standard python data structures for a given problem.
C35.3	Write a code related to the fundamental notions and techniques used in object-oriented programming
C35.4	Develop the application to perform Database access and Transaction Handling.
C35.5	Perform data Analysis using Numpy and Pandas library modules.

CO. No.	Description
Course Outcomes: C36 – Advanced Communication Skills Lab (U21EN3L1)	
C36.1	Organize ideas relevantly and coherently in their communication
C36.2	Analyze and comprehend the text inferentially
C36.3	Write Resume/CV and Cover letter effectively
C36.4	Practice oral presentation confidently
C36.5	Participate in group discussions dynamically and face interviews optimistically

CO. No.	Description
Course Outcomes: C37 - Matlab (U21EC3L4)	
C37.1	Learn features of Mat lab as a programming language, its use as a simulation tool, and write simple programs to solve Scientific, Mathematics, and Engineering problems.
C37.2	Generate Scripts and functions, and interactive computations in Mat lab development environment.
C37.3	Perform and Compute different operations using MAT Lab.
C37.4	Use basic flow control functions efficiently.
C37.5	Create 2D and 3D plotting functions.

CO. No.	Description
Course Outcomes: C38 – Data Structures Lab (U21CS3L1)	
C38.1	Implement the linear data structures using arrays and linked lists.
C38.2	Implement the applications of Stacks.
C38.3	Write code to create Binary Search Trees, AVL Trees and perform standard operations.
C38.4	Implement searching, sorting and hashing techniques and apply appropriate techniques for solving a given Problem
C38.5	Implement Tree and Graph Traversal Algorithms.

CO. No.	Description
Course Outcomes: C39 – Python Programming Lab (U21CM3L1)	
C39.1	Summarize the fundamental concepts of python programming.
C39.2	Outline the control statements and functions by writing python program.
C39.3	Demonstrate Exception Handling, File Handling Operations and Packages
C39.4	Interpret Object Oriented Programming in Python
C39.5	Apply the suitable libraries to perform Data Analysis.
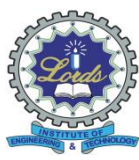
Course Outcomes

Academic Year – 2022-2023   **Semester: V (OU)**

Student will be able to

CO. No.	Description
Course Outcomes:C51 – Automata Theory (PC 501 IT)	
C51.1	Demonstrate abstract machines and their power to recognize the languages
C51.2	Construct Regular Expressions to for accepting the languages, and understand the Concept of Regular Languages and their Properties.
C51.3	Design context free grammars for formal languages and be able to use Pumping Lemma.
C51.4	Explain Push Down Automata and construct the PDA's for the given CFL.
C51.5	Construct the Turing Machines, and apply the knowledge of decidability for Post Correspondence Problems.

CO. No.	Description
Course Outcomes:C52 – Operating Systems (PC 502 IT)	
C52.1	Explain the fundamental concepts and functions of operating system
C52.2	Implement various Process Scheduling Algorithms, Deadlock handling mechanisms.
C52.3	Analyze different Memory management techniques and working with virtual memory.
C52.4	Implement programs using file management system, analyze system performance, understand RAID & can work on I/O interfaces.
C52.5	Explain various security measures related to OS, implement protection mechanisms and implement RTOS.

CO. No.	Description
Course Outcomes: C53 – Artificial Intelligence(PC 503 IT)	
C53.1	Identify Problems that are amenable to solution using state space search algorithm
C53.2	Analyze working of an AI technique using Heuristic Search
C53.3	Demonstrate and design the Bayesian Networks.
C53.4	Apply the concepts of Markov Decision process.
C53.5	Apply Reinforcement Learning.

CO. No.	Description
	Course Outcomes: C54 – Computer Networks (PC 504 IT)
C54.1	Explain the function of each layer of OSI and trace the flow of information from one node t another node in the network
C54.2	Describe the principles of IP addressing the internet routing
C54.3	Describe the working of various networked applications such as DNS, mail, file transfer and WWW
C54.4	Implement client-server socket based networked applications
C54.5	Examine the important aspects and terms of Network Layer, Transport layer and Application Layer in internetworks

CO. No.	Description
	Course Outcomes:C55 – Software Engineering (PC 505 IT)
C55.1	Define different software development process and their usability in different problem domains
C55.2	Explain the process of requirements collection, analyzing and modeling requirements for effective Demonstrating and communication stakeholders
C55.3	Design and develop the architecture of real-world problems towards developing a blue print for implementation
C55.4	Demonstrate the concepts of Software Equality, testing and maintenance.
C55.5	Discuss the concepts related to Risk Management and Software Project estimation

CO. No.	Description
	Course Outcomes:C56 – Distributed Systems (PE 513 IT)
C56.1	Describe the problems and issues associated with distributed systems.
C56.2	Explain occurrence of coordination in distributed systems.
C56.3	Illustrate how replicas are handled in distributed systems and consistency is maintained.
C56.4	Distinguish the implementation of security in distributed systems.
C56.5	Describe design trade-offs in large-scale distributed systems
C56.6	Describe the problems and issues associated with distributed systems.

CO. No.	Description
	Course Outcomes:C57 – Computer Networks & Operating System Lab (PC 551 IT)
C57.1	Demonstrate the usage of basic commands ipconfig, ifconfig, netstat, ping, arp, telnet, ftp, finger, traceroute, whois of LINUX platform
C57.2	Develop and Implement Client-Server Socket based programs using TCP, and UDP sockets
C57.3	Develop and Implement Distance Vector Routing Algorithm
C57.4	Develop and Implement RSA Public Key algorithm
C57.5	Construct simple network by using any modern Open Source. Network Simulation Tool

CO. No.	Description
Course Outcomes:C58–Artificial Intelligence Lab (PC 552 IT)	
C58.1	Design and develop solutions for informed and uninformed search problems in AI
C58.2	Demonstrate reasoning in first order logic using prolog
C58.3	utilize advanced package like NTLK for implementing natural language processing
C58.4	Demonstrate in which knowledge to select and apply python libraries to synthesize information and develop supervised learning models
C58.5	Develop a case study in multidisciplinary areas to demonstrate use of AI
CO. No.	**Description**
Course Outcomes:C59-Web Application Development Lab (PC 552 IT)	
C59.1	Design Web pages and perform form validation using HTML 5.0 In built functions.
C59.2	Apply Styles to the web content using CSS.
C59.3	Create and process web publishing content using XML and JSON
C59.4	Use jQuery to perform client-side Dynamics.
C59.5	Create single page applications (Front End) using Angular JS.

CO. No.	Description
Course Outcomes: C71 – VLSI Design (PC 701 EC)	
C71.1	Explain VLSI Design hierarchy and analyse logic gates using CMOS & transmission gate structures
C71.2	Identify the layers in the physical structure of ICs and draw the layouts of CMOS logic gates
C71.3	Summarize the fabrication process of CMOS ICs and analyse the DC, switching characteristics of CMOS inverter
C71.4	Analyse dynamic CMOS & pseudo nMOS structures of logic gates, SRAM & DRAM cells
C71.5	Develop Verilog code for logic gates, examine the effects of interconnect elements in logic cascades and Explain the floor-planning, routing techniques of VLSI circuits

CO. No.	Description
Course Outcomes: C72 – Big Data Analytics (PC 702 IT)	
C72.1	Demonstrate big data and use cases from selected business domains.
C72.2	Apply the knowledge of NoSQL big data management and experiment with Install, configure, and run Hadoop and HDFS.
C72.3	Apply the concept of Casandra and MongoDB with the procedural approach.
C72.4	Analyse map-reduce analytics using Hadoop
C72.5	Adapt Hadoop related tools such as HBase, Cassandra, Pig, and Hive for big data Analytics.

CO. No.	Description
Course Outcomes: C73 – Cloud Computing(PE 713 IT)	
C73.1	Demonstrate the architecture and concept of different cloud models: IaaS, PaaS, SaaS
C73.2	Evaluate the concepts of Scaling and Load balancing in Cloud.
C73.3	Identify security and compliance issues in Cloud
C73.4	Analyze the portability, interoperability and Cloud Management issues in the Cloud.
C73.5	Explain the design and architecture of SOA.

CO. No.	Description
Course Outcomes: C74 – Start Up Entrepreneurship (OE 701 ME)	
C74.1	Explain Indian Industrial Environment, Entrepreneurship and Economic growth, Small and Large Scale Industries, Types and forms of enterprises
C74.2	Identify the characteristics of entrepreneurs, Emergence of first generation entrepreneurs, Conception and evaluation of ideas and their sources
C74.3	Practice the principles of project formulation, Analysis of market demand, Financial and profitability analysis and Technical analysis
C74.4	Explain the concept of Intellectual Property Rights and Patents
C74.5	Comprehend the aspects of Start-Ups

CO. No.	Description
Course Outcomes:C75 – VLSI Design Lab(PC 751 IT)	
C75.1	Demonstrate Xilinx ISE suite to write Verilog code for logic gates, combinational circuits and sequential circuits.
C75.2	Write Verilog code for basic logic gates, complex logic gates, combinational circuits, and sequential circuits using switch level, gate level, data flow and behavioural modelling
C75.3	Develop test bench code using Verilog and verify the simulation results.
C75.4	Demonstrate the FPGA implementation of digital circuits and generate the synthesis report
C75.5	Draw the layouts of basic logic gates using Microwind

CO. No.	Description
Course Outcomes:C76 – Big Data Analytics Lab (PC 752 IT)	
C76.1	Describe Hadoop working environment
C76.2	Working with big data applications in multi node clusters
C76.3	Write scripts using Pig to solve real world problem
C76.4	Write queries using Hive to analyse the datasets
C76.5	Apply big data and echo system techniques for real world

CO. No.	Description
Course Outcomes:C77 – Project Work (PW 761 IT)	
C77.1	Demonstrate the ability to synthesize and apply the knowledge and skills acquired in the academic program to the real-world problems.
C77.2	Evaluate different solutions based on economic and technical feasibility
C77.3	Effectively plan a project and confidently perform all aspects of project management
C77.4	Demonstrate effective written and oral communication skills
C77.5	Prepare the documentation report and perform the presentation of the project work

CO. No.	Description
Course Outcomes:C78 – Summer Internship (SI 762 IT)	
C78.1	Get Practical experience of software design and development, and coding practices within Industrial/R&D Environments.
C78.2	Gain working practices within Industrial/R&D Environments.
C78.3	Prepare reports and other relevant documentation.