LORDS INSTITUTE OF ENGINEERING & TECHNOLOGY
Department of CSE (Data Science)

Course Outcomes

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

Student will be able to

CO. No.	Description
Course Outcomes: PC501–Design And Analysis of Algorithms (PC501CD)	
C501.1	Ability to analyze the performance of algorithms
C501.2	Ability to choose appropriate algorithm design techniques for solving problems
C501.3	Ability to Understand how the choice of data structures and the algorithmdesign methodsimpact the performance of programs
C501.4	Ability to understand mathematical formulation, complexity analysis and methodologies to solve recurrence relations for algorithms.
C501.5	Ability to understand NP class problems and formulate solutions using standard approaches.
CO. No.	**Description**
Course Outcomes: PC502–Introduction To Data Science And Machine Learning (PC502CD)	
C502.1	Understand the basic concepts in data science, including real world applications
C502.2	Understand statistical and Probability analysis for Given data Set.
C502.3	Understand the essential of machine learning for Data Science.
C502.4	Choose linear, non-linear regression models and classification techniques for data analysis
C502.5	Make use of clustering method as K-means for develop a data science application
CO. No.	**Description**
Course Outcomes: PC503 – Automata Languages and Computation (PC503CD)	
C503.1	Write a formal notation for strings, languages and machines, Design finite automata to accept a set ofstrings of a language.
C503.2	2. Design context free grammars to generate strings of context free languages.
C503.3	Determine equivalence of languages accepted by Pushdown Automata and languages generated bycontext free grammars
C503.4	4. Write the hierarchy of formal languages, grammars and machines.
C503.5	Distinguish between computability and non-computability and Decidability and undesirability
CO. No.	**Description**
Course Outcomes:PC504 – Artificial Intelligence (PC504CD)	
C504.1	Formalize a problem in the language/framework of different AI methods
C504.2	1. Illustrate basic principles of AI in solutions that require problem solving, search,inference
C504.3	Represent natural language/English using Predicate Logic to buildknowledge through variousrepresentation mechanisms

C504.4	Demonstrate understanding of steps involved in building of intelligentagents, expert systems,Bayesian networks
C504.5	Differentiate between learning paradigms to be applied for an application
CO. No.	Description
Course Outcomes: PE507 – Software Engineering (PC507CD)	
C507.1	Acquired working knowledge of alternative approaches and techniques for eachphase ofsoftware development
C507.2	Judge an appropriate process model(s) assessing software project attributes and analyze necessary requirements for project development eventually composingSRS
C507.3	Creation of visual models to describe (non-) algorithmic solutions for projects using various design principles.
C507.4	Acquire skills necessary as an independent or as part of a team for architecting acomplete software project by identifying solutions for recurring problems exerting knowledge on patterns.
C507.5	Concede product quality through testing techniques employing appropriate metrics byunderstanding the practical challenges associated with thedevelopment of a significant software system.
CO. No.	**Description**
Course Outcomes:PC505 – R- for Data Science (PC505CD)	
C505.1	Identify and execute basic syntax and programs in R.
C505.2	Perform the Matrix operations using R built in functions
C505.3	Apply non numeric values in vectors
C505.4	Create the list and data frames
C505.5	Exploit the graph using plot2
CO. No.	**Description**
Course Outcomes:PC551 – Data Science Using R Lab (PC551CD)	
C551.1	After completing this course, the student will be able to:
C551.2	Work with Data Science using R Programming environment
C551.3	Implement various statistical concept like linear and logistic regression
C551.4	Perform Classification and Clustering using appropriate dataset
C551.5	After completing this course, the student will be able to:

CO. No.	Description
Course Outcomes:PC552 – Artificial Intelligence Lab (PC552CD)	
C552.1	After learning the AI concepts the student must be able to design andimplement AI solutions searching techniques using AI.
C552.2	Able to know about facts of querying.
C552.3	Be capable of confidently applying tree mechanism using AI with nueralnetwork
C552.4	Be capable of performing experiments in Machine Learning using real-worlddata.·
C552.5	Able to Text processing.
CO. No.	**Description**
Course Outcomes:PC553 – Design and Analysis of Algorithms Lab (PC553CD)	
C553.1	Design an algorithm in an effective manner
C553.2	Apply iterative and recursive algorithms
C553.3	Design iterative and recursive algorithms
C553.4	Implement optimization algorithms for specific applications
C553.5	Design optimization algorithms for specific applications

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Course Outcomes

Academic Year – 2022-2023 **Semester: III (Autonomous)**

Student will be able to

CO. No.	Description
Course Outcomes:C304 – Digital Electronics & Computer Organization(U21EC304)	
C304.1	Understand the basics of digital electronics
C304.2	Realization of Boolean functions using different methods
C304.3	Design and analyze various combinational circuits
C304.4	Analyze various types of flipflops and their excitation tyables
C304.5	Illustrate the operation of digital computer and to understand the organisation
C304.6	Understand different types of memories
CO. No.	**Description**
Course Outcomes:C301 – Operating System (U21CD301)	
C301.1	Understand the fundamental concepts and Functions of operating system.
C301.2	Analyze various scheduling algorithms.
C301.3	Understand deadlock, prevention and avoidance algorithms.
C301.4	Compare and contrast various memory management schemes.
C301.5	Understand the functionality of file systems and perform administrative tasks on LinuxServers
CO. No.	**Description**
Course Outcomes: CS302-Data Structures (U21CS302)	
C302.1	Implement various data structures using arrays, linked lists
C302.2	Develop ADT necessary for solving problems based on Stacks and Queues
C302.3	Implement binary trees, general trees structures, advanced search trees, heaps,graphs.
C302.4	Implement hash functions and handle collisions.
C302.5	Implement various kinds of sorting techniques and apply appropriate

CO. No.	Description
Course Outcomes: C302 –Database Management Systems (U21CD302)	
C302.1	Design ER-models to represent simple database application scenarios andConstruct database queries usingSQL.
C302.2	Construct database queries using relational algebra and calculus.
C302.3	Recognize and identify the use of normalization and functional dependency indatabase design.
C302.4	Apply the concept of a data base transaction and related concurrent, recovery,facilities
C302.5	Apply and relate how to evaluate a set of queries in query processing
CO. No.	**Description**
Course Outcomes: C301 – Python Programming(U21CM301)	
C301.1	Develop essential programming skills in computer programming concepts likedata types, containers.
C301.2	Apply the basics of programming in the Python language.
C301.3	Solve coding tasks related conditional execution, loops.
C301.4	Acquire coding tasks related to the fundamental notions and techniques used inobject oriented programming
C301.5	Write basic programs related to basic library modules.
CO. No.	**Description**
Course Outcomes:C66 – Data Structures Lab (U21CS3L1)	
C66.1	Write programs in various data structures using arrays and linked lists.
C66.2	Develop ADT necessary for solving problems based on Stacks and Queues.
C66.3	Evaluate binary trees, general tree structures, advanced search trees, heaps,graphs.
C66.4	Apply hash functions and handle collisions.
C66.5	Implement various kinds of sorting techniques and apply appropriate techniquesforsolving a given problem
CO. No.	**Description**
Course Outcomes:C67 – Database Management System Lab (U21IT4L2)	
C67.1	Design database schema for a given application and apply normalization
C67.2	Gather skills in using SQL commands for data definition and data manipulation.
C67.3	Demonstrate creation and usage of Views and Stored Procedures using SQL.
C67.4	Develop solutions for database applications using procedures, cursors and triggers
C67.5	To design and build a simple database system and demonstrate competence with thefundamental tasks involvedwith modelling, designing, and implementing a DBMS
C67.6	Design database schema for a given application and apply normalization

CO. No.	Description
Course Outcomes:C21 – Python Programming Lab (U21CM3L1)	
C21.1	Summarize the fundamental concepts of python programming.
C21.2	Outline the control statements and functions by writing python program.
C21.3	Demonstrate file handling operations and packages.
C21.4	Interpret object-oriented programming in python.
C21.5	Apply the suitable libraries to save simple problems.