

# LORDS INSTITUTE OF ENGINEERING AND TECHNOLOGY

(UGC Autonomous)

## Department of CSE-AIML & AIML

### COURSE OUTCOMES

Academic Year-2024-2025

Semester: III

Student will be able to

CO.No.	Description
	<b>Course Outcomes:C31–Python Programming(U23CM301)</b>
<b>C31.1</b>	Develop essential programming skills in computer programming concepts like data types, containers.
<b>C31.2</b>	Apply looping concepts of programming in the Python language.
<b>C31.3</b>	Solve coding tasks related conditional execution, loops.
<b>C31.4</b>	Acquire coding tasks related to the fundamental notions and techniques used in object-oriented programming
<b>C31.5</b>	Write programs related to python library modules.

CO.No.	Description
	<b>Course Outcomes:C32—Data Structures(U23CS302)</b>
<b>C32.1</b>	Implement various data structures using arrays, linked lists
<b>C32.2</b>	Develop ADT necessary for solving problems based on Stacks and Queues
<b>C32.3</b>	Implement binary trees, general tree structures, advanced search trees, heaps, graphs
<b>C32.4</b>	Implement hash functions and handle collisions
<b>C32.5</b>	Implement various kinds of sorting techniques and apply appropriate techniques for solving a given problem

CO.No.	Description
	<b>Course Outcomes:C33–Digital Electronics &amp; Computer Organization(U23ECE304)</b>
<b>C33.1</b>	Do the number system conversions and simplify Boolean functions.
<b>C33.2</b>	Analyze and simplify Boolean expressions using karnaugh-maps, tabulation method and design combinational circuits.
<b>C33.3</b>	Analyze and design various Sequential circuits.
<b>C33.4</b>	To illustrate the operation of digital computer and to understand its organization.
<b>C33.5</b>	Describe the various memory types



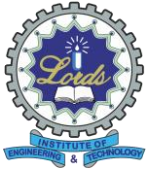
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## Department of CSE-AIML & AIML COURSE OUTCOMES

CO.No.	Description
	<b>Course Outcomes:C34—Mathematics-III (Probability &amp; Statistics) (U23MA301)</b>
<b>C34.1</b>	Determine Probabilities with respect to Random variables and in probability distributions.
<b>C34.2</b>	Compute the parameters of some standard discrete probability distributions and moments.
<b>C34.3</b>	Calculate the statistical parameters uniform and exponential probability distributions
<b>C34.4</b>	Apply Normal distribution to evaluate probabilities and theoretical frequencies.
<b>C34.5</b>	Find the parameters related to correlation, regression and obtain the knowledge of sampling Theory with context to test of hypothesis.
<b>C34.6</b>	Analyze and check the validity of statement using testing of hypothesis for various parameters and goodness of fit.

CO.No.	Description
	<b>Course Outcomes:C35-English for Technical Communication(U23EN301)</b>
<b>C35.1</b>	Apply technical communication skills effectively.
<b>C35.2</b>	Adapt different types of official correspondence successfully.
<b>C35.3</b>	Construct report writing productively using various techniques.
<b>C35.4</b>	Develop the skills of manual writing adequately.
<b>C35.5</b>	Interpret the information transfer from verbal to non-verbal data and vice-versa completely.

CO.No.	Description
	<b>Course Outcomes:C37–Soft Skills &amp; Employability Skills Lab(U23EN3L1)</b>
<b>C36 .1</b>	Utilize soft skills at professional level effectively.
<b>C36 .2</b>	Function efficiently in multidisciplinary settings by using leadership skills.
<b>C36 .3</b>	Build confidence through interpersonal skills utterly.
<b>C36 .4</b>	Write Resume/CV and cover letter comprehensively.
<b>C36 .5</b>	Enhance the skills of group discussion and interview perfectly.



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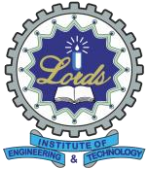
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### COURSE OUTCOMES

CO.No.	Description
	<b>Course Outcomes:C37–Python Programming lab(U23CM3L1)</b>
<b>C37 .1</b>	Summarize the fundamental concepts of python programming
<b>C37 .2</b>	outline the control statements and functions by using python programming
<b>C37 .3</b>	Demonstrate the file handling operations and packages
<b>C37 .4</b>	Interpret object-oriented programming in python
<b>C37 .5</b>	Apply the suitable libraries to solve simple problems

CO. No.	Description
	<b>Course Outcomes:C38—Data Structures Lab(U23CS3L1)</b>
<b>C38.1</b>	Write programs in various data structures using arrays and linked lists.
<b>C38.2</b>	Develop ADT necessary for solving problems based on Stacks and Queues
<b>C38.3</b>	Evaluate binary trees, general tree structures, advanced search trees, heaps, graphs
<b>C38.4</b>	Apply hash functions and handle collisions
<b>C38.5</b>	Implement various kinds of sorting techniques and apply appropriate techniques for solving a given problem



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### COURSE OUTCOMES

AcademicYear-2024-2025

Semester: V

Student will be able to

O.No.	Description
	<b>Course Outcomes:C51-MachineLearning(U21AM501)</b>
C51.1	Summarize concepts of Data Science and techniques of Machine Learning
C51.2	Apply exploratory data analysis and Data preparation and preprocessing on different datasets and Evaluate Statistical measurements of the given data.
C51.3	Evaluate the performance of regression problems
C51.4	Evaluate the results of the classification algorithms.
C51.5	Design and implement machine learning solutions SVM, ensemble method and Instance based learning.

CO.No.	Description
	<b>Course Outcomes:C52-Design and Analysis of Algorithm (U21CS501)</b>
C52.1	Illustrate Basic efficiency classes and Asymptotic Notation
C52.2	Apply different problem-solving Strategies such as divide-and -conquer and transfer-and-conquer
C52.3	Analyze various algorithms, such as Floyd's, TSP, etc., to address problems in the actual world
C52.4	Determine the classes P and NP
C52.5	Create solutions for n-Queens, Subset-Sum, Assignment, Knapsack, and other problems.

CO.No.	Description
	<b>Course Outcomes:C53-Automata Theory, Languages and Computation(U21CM501)</b>
C53.1	<b>Design</b> a Finite Automaton and establish its correspondence with regular languages.
C53.2	<b>Analyze</b> Regular Expressions and Prove a given language is regular or not.
C53.3	<b>Develop</b> Different types of grammars like RG, CFG
C53.4	<b>Design</b> Pushdown Automata for recognizing context-free languages and <b>establish</b> equivalence of language of PDA and CFG.
C53.5	<b>Convert</b> the given CFG into CNF and GNF
C53.6	<b>Design</b> Turing Machine for the given language and illustrate it's working and address their importance in computational Problems



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### COURSE OUTCOMES

CO.No.	Description
	<b>Course Outcomes:C54-Foundation of Data Science(U21CM506)</b>
<b>C54.1</b>	Apply the basic concepts in data science, including real world applications
<b>C54.2</b>	Illustrate the concepts of data mining
<b>C54.3</b>	Categorize qualitative data and quantitative data
<b>C54.4</b>	Extract knowledge using data preprocessing concepts.
<b>C54.5</b>	Implement concepts of data science in R programming language

CO.No.	Description
	<b>Course Outcomes: C55-Business Economics and Financial Analysis (U21MB501)</b>
<b>C55.1</b>	Apply the concepts of business and economics during his professional and personal life.
<b>C55.2</b>	Illustrate the elasticity of the demand of the product, different types, and measurement of elasticity of demand and factors influencing on elasticity of demands.
<b>C55.3</b>	Recognize the Production function, features of Iso-Quants and Iso-Costs, different types of internal economies, external economies and law of returns with appropriate examples.
<b>C55.4</b>	Prepare the financial statements of the firm.
<b>C55.5</b>	To Analyze the financial statements using ratio analysis and cash flow techniques.

CO.No	Description
	<b>CourseOutcomes:C56–Machine Learning lab(U21AM5L1)</b>
<b>C56.1</b>	Apply Exploratory Data Analysis on titanic data set
<b>C56.2</b>	Analyze and implement necessary action in Data Preprocessing in Machine learning
<b>C56.3</b>	Build a linear regression model using python and predict target on unseen data
<b>C56.4</b>	Implement k-nearest neighbor's classification and Decision Tree Classification.
<b>C56.5</b>	Implement SVM and ensemble method and Instance based learning.



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CO.No.	Description
	<b>CourseOutcomes:C57- Design and Analysis of Algorithm Lab (U21CS5L1)</b>
<b>C57.1</b>	Implement fundamental algorithms like sorting, searching, and graph algorithms using a programming language.
<b>C57.2</b>	Analyze the time and space complexity of algorithms using Big-O notation.
<b>C57.3</b>	Design efficient algorithms using paradigms such as divide and conquer, dynamic programming, and greedy methods.
<b>C57.4</b>	Apply algorithmic techniques to solve real-world problems effectively.
<b>C57.5</b>	Write algorithms for improved performance, balancing time and space complexity using optimization techniques.

CO.No.	Description
	<b>CourseOutcomes:C58-A&amp;R Lab(U21MA5L1)</b>
<b>C58.1</b>	Acquire the knowledge of Data analysis and its interpretation through percentages and measures of central tendency.
<b>C58.2</b>	Calculate the problems related to number series and reasoning ability.
<b>C58.3</b>	Analyze the number system pattern and determine profit and losses.
<b>C58.4</b>	Evaluate proportions and understand time framework situations
<b>C58.5</b>	Compute problems based on combinatory, clock and calendar



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### COURSE OUTCOMES

AcademicYear-2024-2025  
Student will be able to

Semester: VII

CO.No	Description
	<b>CourseOutcomes:C71-InformationSecurity(U21CM701)</b>
<b>C71.1</b>	Describe the steps in Security Systems development life cycle (SecSDLC)
<b>C71.2</b>	Understand the legal and ethical issues, common threats and attack to information systems
<b>C71.3</b>	Identify security needs using risk management and choose the appropriate risk control strategy based on business needs
<b>C71.4</b>	Use the basic knowledge of security frameworks in preparing security blue print for the organization
<b>C71.5</b>	Use ethical hacking tools to study attack patterns and cryptography and secure communication protocols

CO.No.	Description
	<b>CourseOutcomes:C72-Deep learning techniques(U21CM702)</b>
<b>C72.1</b>	To understand the fundamentals of deep learning
<b>C72.2</b>	To understand deep learning algorithms and design neural network
<b>C72.3</b>	To train and implement a neural network
<b>C72.4</b>	To have knowledge about convolutional neural network
<b>C72.5</b>	To apply neural network in various fields

CO. No.	Description
	<b>Course Outcomes:C73- Mobile computing (U21CM705)</b>
<b>C73.1</b>	Infer knowledge about mobile communications and its services.
<b>C73.2</b>	Identifying several communication access techniques.
<b>C73.3</b>	Determine the functionality of MAC, Network layer.
<b>C73.4</b>	Identify and solve database issues using hoarding techniques.
<b>C73.5</b>	Identifying a routing protocol for given Adhoc Networks



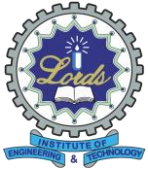
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CO.No.	Description
	<b>CourseOutcomes: C74- Road Safety Engineering(U21CE709)</b>
<b>C74.1</b>	the fundamentals of traffic safety analysis
<b>C74.2</b>	Analyze Accident Data
<b>C74.3</b>	Remember the concepts of Road Safety in Urban transport
<b>C74.4</b>	Apply Crash Reduction Techniques
<b>C74.5</b>	Design of Urban Infrastructure considering Safety Aspects

CO.No.	Description
	<b>CourseOutcomes:C76-Major Project(U21CM701)</b>
<b>C75.1</b>	Describe the problem domain and identify key challenges.
<b>C75.2</b>	Learn to formulate a problem statement and project scope
<b>C75.3</b>	Data Preparation and Modeling
<b>C75.4</b>	Understand model deployment and integration strategies.
<b>C75.5</b>	Learn to evaluate model performance and interpret results

CO.No.	Description
	<b>CourseOutcomes:C77-Information Security Lab(U21CM7L1)</b>
<b>C76.1</b>	Understand the legal and ethical issues, common threats and attack to information systems
<b>C76.2</b>	Use different open-source tools for network security and analysis
<b>C76.3</b>	Implement the cipher techniques
<b>C76.4</b>	Develop the various security algorithms
<b>C76.5</b>	Implement the ethical hacking tools to secure communication protocols



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### COURSE OUTCOMES

CO.No.	Description
	<b>CourseOutcomes:C78-Deep Learning Lab (U21CM7L1)</b>
<b>C77.1</b>	Implement basic and advanced neural networks.
<b>C77.2</b>	Train deep models using real-world datasets.
<b>C77.3</b>	Experiment with optimization and tuning methods.
<b>C77.4</b>	Analyze model performance and accuracy.
<b>C77.5</b>	Deploy deep learning models in practical applications.

CO. No.	Description
	<b>Course Outcomes:C78-Advanced Machine Learning (U21AM701)</b>
<b>C78.1</b>	Describe the steps in Security Systems development life cycle (SecSDLC)
<b>C78.2</b>	Understand the legal and ethical issues, common threats and attack to information systems
<b>C78.3</b>	Identify security needs using risk management and choose the appropriate risk control strategy based on business needs
<b>C78.4</b>	Use the basic knowledge of security frameworks in preparing security blue print for the organization
<b>C78.5</b>	Use ethical hacking tools to study attack patterns and cryptography and secure communication protocols

CO. No.	Description
	<b>Course Outcomes:C7-Advanced Machine Learning Lab (U21AM7L1)</b>
<b>C79.1</b>	Implement various Protocols Using Classification & Regression Techniques
<b>C79.2</b>	Implement Clustering Mechanisms
<b>C79.3</b>	Implement Decision Trees
<b>C79.4</b>	Implement & Analyze different Random Forest Techniques
<b>C79.5</b>	Implement Neural Networks