

**ANNAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES :: TIRUPATI
(AUTONOMOUS)**

DEPARTMENT OF Master of Computer Applications

Course Name	Course Outcomes	
Mathematical Foundations Of Computer Science (22MCA0101)	CO1	Understand mathematical reasoning in order to read, comprehend, and construct mathematical arguments.
	CO2	Perform combinatorial analysis to solve counting problems and analyze algorithms
	CO3	work with discrete structures that include sets, permutations, relations, graphs, trees, and finite-state machines, which are the abstract mathematical structures
	CO4	describe how an output of a mathematical function is computed given an input
Software Engineering (22MCA0102)	CO1	Introduce SE and Models
	CO2	Discuss Techniques on SPM, Requirements analysis and Specification
	CO3	Highlights some important facets of Software Design
	CO4	Testing Techniques and Quality Control Activities
	CO5	Comprehend on Software Quality Assurance and Trends
Web Programming (22MCA0103)	CO1	Design a Web Page using HTML
	CO2	Create Page with Client-side validation
	CO3	Create, Organize and Manage a web site
	CO4	Create dynamic PHP web pages
	CO5	Implement database connectivity with Front-end
C-Programming & Data Structures (22MCA0104)	CO1	Understand the basics of C Programming Language
	CO2	Map the C concepts with memory usage
	CO3	Implement Searching and Sorting algorithms, and Linear Data Structures using arrays
	CO4	Implement Stacks, Queues and Tree Data Structure using Linked List
	CO5	Implement Graph Data structure
Database Management Systems (22MCA0105)	CO1	Know the fundamentals of Databases
	CO2	Code SQL and PL/SQL programming Concepts
	CO3	Design a database for a real-world information system
	CO4	Process and Optimize the query
	CO5	Understand transaction and concurrency techniques in real time applications
Web Programming Laboratory (22MCA0106)	CO1	Create a web page in HTML and css
	CO2	Validate Web page at client side
	CO3	Store/Retrieve data from databases to web page
C and Data Structures Laboratory (22MCA0107)	CO1	Write basic c programs
	CO2	Perform searching and sorting techniques on data
	CO3	Write programs on derived data types
	CO4	Implement linear and non-linear data structures
Database Management Systems Laboratory (22MCA0108)	CO1	Create and insert records into table
	CO2	Retrieve information from table(s)
	CO3	Use procedures to program the data access and manipulation
	CO4	Create user interfaces and generate reports
Foundations Of R Software (22MCA0109)	CO1	Understand the basics of R
	CO2	Implement Data Structures
	CO3	Implement Statistical Graphics, Control Statements and Group manipulation
	CO4	Implement Iteration, Data Reshaping and String Manipulation
	CO5	Apply basic statistics in R
Mobile Application Development (22MCA0201)	CO1	Demonstrate knowledge on mobile platforms, mobile user interface and user interface design requirements.
	CO2	Design user interfaces by analyzing user requirements.
	CO3	Develop mobile applications for Messaging, Location-Based Services, and Networking
	CO4	Develop mobile applications and publish in different mobile platforms
	CO5	Use Android studio and iOS tools to develop mobile applications.
Machine Learning (22MCA0202)	CO1	Understand the basics of machine learning and decision tree learning
	CO2	Comprehend the working of ANN and hypothesis evaluation
	CO3	Illustrate Bayesian Learning and dimensionality reduction
	CO4	Estimate clustering models and non-parametric methods
	CO5	Perform Linear Discrimination and Multilayer Perceptrons
Object-Oriented Programming Through Java	CO1	Understand the basics of Java Programming Environment
	CO2	Code on Objects, classes, and Inheritance
	CO3	Relate with Interfaces, Multi threading and Exception handling

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(22MCA0203)	CO4	Demonstrate Generic Programming and Collection Framework
	CO5	Create GUI Programming with Swing
Mobile Application Development Laboratory (22MCA0206)	CO1	Create data sharing with different applications
	CO2	Develop applications using services
	CO3	Publishing android applications.
Machine Learning Laboratory (22MCA0207)	CO1	Explore the data
	CO2	Train the dataset
	CO3	Test the dataset
	CO4	Evaluate the model
Object-Oriented Programming Through Java Laboratory (22MCA0208)	CO1	Implement object oriented programming concepts using java
	CO2	Develop interactive programs using swings.
Python Programming (22MCA0209)	CO1	Work with Strings, numbers, expressions, and conditional statements
	CO2	Implement files, lists, dictionaries and functions
	CO3	Implement graphics and GUI-based programming
	CO4	Implement searching and sorting algorithms
Soft Skills (22MCA0210)	CO1	Effectively communicate through verbal/oral communication and improve the listening skills
	CO2	Write precise briefs or reports and technical documents
	CO3	Actively participate in group discussion / meetings / interviews and prepare, deliver presentations
	CO4	Function effectively in multi-disciplinary and heterogeneous teams through the knowledge of team work, Inter-personal relationships and leadership quality.