



# RISE KRISHNA SAI PRAKASAM GROUP OF INSTITUTIONS::ONGOLE

(Approved by AICTE-NEW DELHI, Affiliated to JNTUK KAKINADA)

NH-16, Valluru, -523272, Ongole, Prakasam District, A.P

## DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS

### COURSE OUTCOMES (2017-18)

#### I SEMESTER

CO No.	Subject: C PROGRAMMING AND DATA STRUCTURES	Taxonomy Level
After completing the course the student shall be able to		
MC 1611.1	Implement basic programs by using C concepts.	Understanding
MC 1611.2	Implement basic programs by using C concepts.	Applying
MC 1611.3	Select the data structures that efficiently model the information in a problem	Applying
MC 1611.4	Assess efficiency trade-offs among different data structure implementations or combinations	Applying
MC 1611.5	Implement and know the application of algorithms for sorting and pattern matching.	Analyzing

CO No.	Subject: COMPUTER ORGANIZATION	Taxonomy Level
After completing the course the student shall be able to		
MC 1612.1	Describe the fundamental organisation of a computer system	Understanding
MC 1612.2	Explain the functional units of a processor	Applying
MC 1612.3	Explain addressing modes, instruction formats and program control statements	Applying
MC 1612.4	Analyze the performance of commercially available computers.	Applying
MC 1612.5	To develop logic for assembly language programming	Analyzing

CO No.	Subject: DISCRETE MATHEMATICAL STRUCTURES AND GRAPH THEORY	Taxonomy Level
After completing the course the student shall be able to		
MC 1613.1	Use logical notation. Perform logical proofs.	Understanding





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## DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS

MC 1613.2	Apply recursive functions and solve recurrence relations.	Applying
MC 1613.3	Determine equivalent logic expressions.	Applying
MC 1613.4	Describe useful standard library functions, create functions, and declare parameters.	Applying
MC 1613.5	Use graphs and trees. Apply basic and advanced principles of counting.	Analyzing

CO No.	Subject: STATISTICAL PROGRAMMING WITH R	Taxonomy Level
After completing the course the student shall be able to		
MC1614.1	download and install R and RStudio.navigate and optimise the R integrated development environment (IDE) RStudio.	Understanding
MC1614.2	install and load add-in packages.	Applying
MC1614.3	import external data into R for data processing and statistical analysis.	Applying
MC1614.4	learn the main R data structures – vector and data frame.	Applying
MC1614.5	compute basic summary statistics.	Analyzing

CO No.	Subject: ACCOUNTING AND FINANCIAL MANAGEMENT	Taxonomy Level
After completing the course the student shall be able to		
MC1615.1	Will have understanding regarding Indian taxation system	Understanding
MC 1615.2	Will be able to apply knowledge of accounting concepts & conventions.	Applying
MC 1615.3	Will be able to understand basic concepts of costing, methods of costing and techniques of costing for its application in real life	Applying
MC 1615.4	Will be able to understand basics of audit function and will help the student to apply the same on the job	Applying
MC 1615.5	Will be able to understand the perspectives of financial management them to day to day and key financial management issues.	Analyzing

CO No.	Subject: C PROGRAMMING LAB	Taxonomy Level
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After completing the course the student shall be able to		
MC1617.1	To learn/strengthen a programming language like C	Understanding
MC1617.2	To learn problem solving techniques	Applying
MC1617.3	To introduce the student to simple linear and non linear data structures such as lists	Applying
MC1617.4	To introduce the student to simple linear and non linear data structures such as stacks	Applying
MC1617.5	To introduce the student to simple linear and non linear data structures such as queues	Analyzing

CO No.	Subject: STATISTICAL PROGRAMMING WITH R LAB	Taxonomy Level
After completing the course the student shall be able to		
MC 1618.1	Understand the basics in R programming in terms of constructs, control statements, string functions	Understanding
MC 1618.2	Understand the use of R for Big Data analytics	Applying
MC 1618.3	Learn to apply R programming for Text processing	Applying
MC 1618.4	Able to appreciate and apply the R programming from a statistical perspective	Applying
MC 1618.5	terms of constructs, control statements, string functions	Analyzing

CO No.	Subject: OOPS THROUGH JAVA	Taxonomy Level
After completing the course the student shall be able to		
MC1621.1	Describe the uses OOP concepts	Understanding
MC1621.2	Apply OOP concepts to solve real world problems	Applying
MC1621.3	Distinguish the concept of packages and interfaces	Applying
MC1621.4	Demonstrate the exception handing, multithread applications with synchronization	Applying
MC1621.5	Design the GUI based applications using AWT and Swings	Analyzing





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## DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS

### II SEMESTER

CO No.	Subject: OPERATING SYSTEMS	Taxonomy Level
After completing the course, the student shall be able to		
MC 1622.1	Demonstrate the knowledge of Systems Programming and Operating Systems	Understanding
MC 1622.2	Formulate the Problem and develop the solution for same.	Applying
MC 1622.3	Compare and analyze the different implementation	Applying
MC 1622.4	Compare and analyze the different implementation approach of system programming and operating system abstractions.	Applying
MC 1622.5	Interpret various OS functions used in Linux / Ubuntu	Analyzing

CO No.	Subject: SOFTWARE ENGINEERING	Taxonomy Level
After completing the course the student shall be able to		
MC 1623.1	Identify unique features of various software application domains and classify software applications	Understanding
MC 1623.2	Choose and apply appropriate lifecycle model of software development	Applying
MC 1623.3	Describe principles of agile development, discuss the SCRUM process and distinguish agile process model from other process models.	Applying
MC 1623.4	Identify user needs and formulate software specifications.	Applying
MC 1623.5	Analyze software requirements by applying various modeling techniques.	Analyzing

CO No.	Subject: OPTIMIZATION TECHNIQUES	Taxonomy Level
After completing the course the student shall be able to		
MC 1624.1	explain the fundamental knowledge of Linear programming	Understanding
MC 1624.2	dynamic programming	Applying
MC 1624.3	use classical optimization techniques and numerical methods of	Applying





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	optimization	
MC 1624.4	describe the basics of different evolutionary algorithm	Applying
MC 1624.5	enumerate fundamentals of integer programming technique and apply different technique	Analyzing

CO No.	Subject: COMPUTER GRAPHICS	Taxonomy Level
After completing the course the student shall be able to		
MC 1625.1	Apply mathematics and computer programming to computer graphics	Understanding
MC 1625.2	applications and problem solutions	Applying
MC 1625.3	Systematically identify, evaluate and solve complex technical and aesthetic problems	Applying
MC 1625.4	Be ready to contribute in a significant way to the computer graphics industry	Applying
MC 1625.5	significant way to the computer graphics industry	Analyzing

### III SEMESTER

CO No.	Subject: DATA BASE MANAGEMENT SYSTEM	Taxonomy Level
After completing the course the student shall be able to		
MC1631.1	Demonstrate Data Base with different applications of DBMS. Identifies the entity, attributes, Relationships and keys in various Data Models.	Understanding
MC1631.2	Utilize relational algebra concepts like selection ,projection ,relational calculus which helps in understanding queries	Applying
MC1631.3	Experiment ddl, dml cmds ect, by writing queries in standard language of relational databases..	Applying
MC1631.4	Develop various advance SQL queries related to Transaction Processing Locking using concept of Concurrency control.	Applying
MC1631.5	Analyze indexing mechanisms for efficient retrieval of information from a database.	Analyzing





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## DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS

CO No.	Subject: COMPUTER COMMUNICATION	Taxonomy Level
After completing the course the student shall be able to		
MC1632.1	Outline the basic concepts of reference models and Identify the functionality of physical layer in computer communications	Understanding
MC1632.2	Explain various physical layer transmission techniques, Examine the datalink layer design issues	Applying
MC1632.3	List various data link access methods and network layer functions	Applying
MC1632.4	Outline the IEEE 802.11 standard	Applying
MC1632.5	Examine various application layer functionalities	Analyzing

CO No.	Subject: UNIX PROGRAMMING LAB	Taxonomy Level
After completing the course the student shall be able to		
MC 1633.1	To demonstrate the basic knowledge of Linux commands and file handling utilities by using Linux shell environment	Understanding
MC 1633.2	To evaluate the concept of shell scripting programs by using an AWK and SED commands.	Applying
MC 1633.3	To create the directory, how to change and remove the directory.	Applying
MC 1633.4	To analyze the process of how the parent and child relationships	Applying
MC 1633.5	To define IPC mechanism.	Analyzing

CO No.	Subject: MANAGEMENT INFORMATION SYSTEMS	Taxonomy Level
After completing the course the student shall be able to		
MC 1634.1	Relate the basic concepts and technologies used in the field of management information systems	Understanding
MC 1634.2	Compare the processes of developing and implementing information systems.	Applying
MC 1634.3	Outline the role of the ethical, social, and security issues of information systems	Applying





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## DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS

MC 1634.4	Translate the role of information systems in organizations, the strategic management processes, with the implications for the management	Applying
MC 1634.5	Apply the understanding of how various information systems like work together to accomplish the information objectives of an organization.	Analyzing

CO No.	Subject: DESIGN AND ANALYSIS OF ALGORITHMS	Taxonomy Level
After completing the course the student shall be able to		
MC1635.1	Understand the fundamentals for analyzing time and space complexity of algorithms	Understanding
MC1635.2	Apply divide and conquer technique to solve real time problems related to computing and use greedy technique to solve problems	Applying
MC1635.3	Make use of dynamic programming paradigm for solving problems like knapsack, matrix multiplication and optimal binary search tree.	Applying
MC1635.4	illustrate backtracking with applications on n-queen problem sum of subsets and graph coloring	Applying
MC1635.5	Explain branch and bound paradigm with Travelling sales person problem and 0/1 knapsack problem.	Analyzing

CO No.	Subject: DATA BASE MANAGEMENT SYSTEMS LAB	Taxonomy Level
After completing the course the student shall be able to		
MC1636.1	Utilize SQL to execute queries for creating database and performing data manipulation operations	Understanding
MC1636.2	Examine integrity constraints to build efficient databases	Applying
MC1636.3	Apply queries using advanced concepts of SQL.	Applying
MC1636.4	Build PL SQL including procedure, functions, cursors, and triggers	Applying
MC1636.5	Develop operation on relation using PL/SQL	Analyzing



CO No.	Subject: UNIX PROGRAMMING	Taxonomy
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## DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS

		Level
After completing the course the student shall be able to		
MC 1637.1	Understand commands & File System and Permissions of UNIX	Understanding
MC 1637.2	Understand the basic syntax for command line used in UNIX	Applying
MC 1637.3	Understand the different filters and awk used in UNIX	Applying
MC 1637.4	Shell Programming basics and IPC	Applying
MC 1637.5	Understand the basic process commands in UNIX.	Analyzing

CO No.	Subject: COMPUTER NETWORKS LAB	Taxonomy Level
After completing the course the student shall be able to		
MC 1638.1	Choose the practical approach to network communication protocols.	Understanding
MC 1638.2	Choose network layers, structure/format and role of each network layer.	Applying
MC 1638.3	Analyze to design and implement various network application such as data transmission between client and server	Applying
MC 1638.4	Develop to design and implement various network application such as file transfer, real-time multimedia transmission.	Applying
MC 1638.5	Build the various Routing Protocols/Algorithms and Internetworking.	Analyzing

### IV SEMESTER

CO No.	Subject: ADVANCED JAVA & WEB TECHNOLOGIES	Taxonomy Level
After completing the course the student shall be able to		
MC1342.1	Identify HTML elements and its attributes.	Understanding
MC1342.2	Develop Client Side Script using HTML, CSS & JavaScript	Applying
MC1342.3	Develop applications using SERVLET and WEB.XML Schema	Applying







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MC1342.4	Develop dynamic web application using JSP	Applying
MC1342.5	Implement programs through JSP and JDBC.	Analyzing

CO No.	Subject: DATA WAREHOUSING AND MINING	Taxonomy Level
After completing the course the student shall be able to		
MC1343.1	Understand the data warehouse principles, data mining concepts and working. Understand various data preprocessing procedures and their application.	Understanding
MC1343.2	Discuss the general approach to solve Classification problem	Applying
MC1343.3	Discuss basic concepts and algorithms of Association analysis.	Applying
MC1343.4	Understand the basic concepts and algorithms of Cluster Analysis	Applying
MC1343.5	Understand the basic concepts of data mining	Analyzing

CO No.	Subject: HUMAN COMPUTER INTERACTION	Taxonomy Level
After completing the course the student shall be able to		
MC1345.1	Popularity of graphics, the concept of direct manipulation, graphical system	Understanding
MC1345.2	Human interaction with computers, importance of human characteristics human consideration	Applying
MC1345.3	screen navigation and flow, Visually pleasing composition, amount of information	Applying
MC1345.4	Components text and messages. Icons and increases, Multimedia, colors, uses problems, choosing colors	Applying
MC1345.5	Keyboard and function keys, pointing devices, speech recognition digitization and generation	Analyzing



CO No.	Subject: DATA WAREHOUSING AND MINING LAB	Taxonomy Level
After completing the course the student shall be able to		



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MC134B.1	Understand various data preprocessing procedures and their applications in WEKA	Understanding
MC134B.2	Examples for Classification problem.	Applying
MC134B.3	Example programs for Association analysis	Applying
MC134B.4	Example programs for Cluster Analysis	Applying
MC134B.5	Understand the basic concepts of datamining	Analyzing

CO No.	Subject: INFORMATION SECURITY	Taxonomy Level
After completing the course the student shall be able to		
MC1351.1	Network Security issues	Understanding
MC1351.2	Encryption principles and algorithms	Applying
MC1351.3	Public key cryptography and Authentication services	Applying
MC1351.4	Web security and Email privacy	Applying
MC1351.5	Concepts virus, threats and firewalls	Analyzing

CO No.	Subject: NETWORK PROGRAMMING	Taxonomy Level
After completing the course the student shall be able to		
MC1352.1	OSI model, Unix standards, TCP and UDP & TCP connection establishment	Understanding
MC1352.2	TCP Echo server functions, Normal startup. terminate and signal handling server process termination	Applying
MC1352.3	Sockets and I/O Multiplexing and socket options	Applying
MC1352.4	Elementary UDP sockets and Elementary name and Address conversions	Applying
MC1352.5	IPC and remote Login	Analyzing





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CO No.	Subject: OBJECT ORIENTED ANALYSIS AND DESIGN	Taxonomy Level
After completing the course the student shall be able to		
MC1353.1	Apply complex system using object-oriented approach	Understanding
MC1353.2	Build the class diagram with responsibilities and state using UML notation	Applying
MC1353.3	Identify the events, classes and responsibilities of the problem domain.	Applying
MC1353.4	Describe basic Interactions, Use cases of the problem domain.	Applying
MC1353.5	Implement various states and advanced behavioral modeling using UML notation. Classify components and nodes of the problem domain	Analyzing

CO No.	Subject: E-COMMERCE	Taxonomy Level
After completing the course the student shall be able to		
MC1356.1	Understand E-Commerce applications & . Mercantile Process models	Understanding
MC1356.2	Understand Electronic payment systems	Applying
MC1356.3	Understand the – EDI & SCM	Applying
MC1356.4	Describe basic Interactions, Use cases of the problem domain.	Applying
MC1356.5	Implement various states and advanced behavioral modeling using UML notation. Classify components and nodes of the problem domain	Analyzing

CO No.	Subject: SOFTWARE PROJECT MANAGEMENT	Taxonomy Level
After completing the course the student shall be able to		
MC1359.1	Conventional Software Management	Understanding
MC1359.2	Life cycle phases	Applying





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MC1359.3	Model based software architectures	Applying
MC1359.4	Project Control and Process instrumentation	Applying
MC1359.5	Future Software Project Management	Analyzing

CO No.	Subject: OBJECT ORIENTED ANALYSIS AND DESIGN(UML) LAB	Taxonomy Level
After completing the course the student shall be able to		
MC135A.1	Apply complex system using object-oriented approach.	Understanding
MC135A.2	Build the class diagram with responsibilities and state using UML notation	Applying
MC135A.3	Identify the events, classes and responsibilities of the problem domain	Applying
MC135A.4	Describe basic Interactions, Use cases of the problem domain.	Applying
MC135A.5	Implement various states and advanced behavioral modeling using UML notation. Classify components and nodes of the problem domain	Analyzing

CO No.	Subject: NETWORK PROGRAMMING LAB	Taxonomy Level
After completing the course the student shall be able to		
MC135B.1	Implement shell script for basic file operations	Understanding
MC135B.2	Implement shell script for file management operations	Applying
MC135B.3	Implement shell script for file handling work	Applying
MC135B.4	Implement shell script for basic mathematical programming	Applying
MC135B.5	Implement shell script for copy file & count words and line in a file	Analyzing

*Sugaly*  
CO-ORDINATOR



*[Signature]*  
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