MAR AUGUSTHINOSE COLLEGE RAMAPURAM
Department of Computer Science
POs, PSOs and COs of Post Graduate M.Sc. Computer Science Programme

Expected Outcomes of M.Sc. Computer Science degree programme offered by the University is as follows:

PROGRAMME SPECIFIC OUTCOMES (PSOs)

M.Sc. Computer Science	PSO1	Create research contributions in the area of Computing/IT and ITES.
	PSO2	Be prepared for advanced education in computer science and software engineering.
	PSO3	Development of analytical skills, acquisition of knowledge and understanding of systems, languages and tools required for effective computation-based problem solving.
	PSO4	Recognize the importance and possess the skills necessary for life-long learning and students expected to demonstrate the ability to communicate effectively and to work as a team.
	PSO5	Students will gain a substantial knowledge of one of the following Computer Science specialties: Database Management, Networking, Artificial Intelligence, Information Security, Computer Engineering, etc.

COURSE OUTCOMES (COs)

Course		Course Outcome
CA500101 - Computational Mathematics	CO 1	Develop Students problem solving Skills
	CO 2	Examine, Analyze and Interpret Data
	CO 3	Understand and visualize their analysis
	CO4	Understand Mathematical foundations of CS topics
CA010101 - Advanced web Technology	CO 1	Students should able to understand the basics of HTML, CSS, JAVASCRIPT & PHP.
	CO 2	Define the structure of a web page using HTML
	CO 3	Define the formatting of a web page using CSS
	CO 4	Create client side scripts using JavaScript
	CO 5	Create server side scripts using PHP.
CA010102 - Operating Systems	CO 1	Acquire the basic understanding of operating system, system architecture
	CO 2	Understand the concepts of process and various process scheduling algorithms
	CO 3	Appraise the design of various algorithms for process Synchronization and deadlock
	CO 4	Understand various primary memory management strategies
	CO 5	Understand the fundamental concepts and the basic set of commands of Linux
CA500102 - Advanced Java Programming	CO 1	Develop error-free, well-documented Java programs
	CO 2	Develop and test Java network, search engine, and web framework programs
	CO 3	Learn how to write, test, and debug advanced-level Object-Oriented programs using Java
	CO 4	Uderstanding java applications
CA010203 -Lab I [Java& PHP]	CO 1	Use an integrated development environment to write, compile, run, java programs
	CO 2	Read and make elementary modifications to Java programs that solve real-world
CA500201 - Advanced Data Structures	CO 1	Understand the concept of algorithms and will be able to measure the efficiency of algorithms.

	CO 2	Using the concept of arrays students will be able to create different data structures and perform searching and sorting on arrays.
	CO 3	Understand the concept of dynamic data structures and implement link lists.
	CO 4	Understand the working of non linear data structures like tree and graph.
CA010201 - Computer Networks	CO 1	Students should able to understand the basics of Network Models
	CO 2	Understand the working of Physical & Data link layers
	CO 3	Understand the working of Network layers and Internet protocols
	CO 4	Understand the working of Transport layers and transport protocols
	CO 5	Define different Application layer protocols.
CA010202 - Research Methodology and Technical Writing	CO 1	Acquire the basic understanding of research and research methodology.
	CO 2	Understand the importance of reading and reviewing in research and research design
	CO 3	Understand different methods of data collection and data analysis.
	CO 4	Understand reporting and thesis writing in research.
	CO 5	Understand the concept of research ethics.
CA500202 - Database Management system and SQL	CO 1	Understand about DBMS and Data Models
	CO 2	Understand about relational Data Model.
	CO 3	Understand SQL
	CO 4	Understand Object Oriented Data base
CA010203 - Lab II [DS using Java, SQL]	CO 1	Classify different data structures such as stack, queues, linked list, trees and graphs
	CO 2	Analyze and implement various searching and sorting technique
	CO 3	Understand SQL commands for creating, manipulating tables.
	CO 4	Understand operations on database
CA010301- Digital Image	CO 1	Understand about Digital Image Processing fundamentals

Processing	CO 2	Understand about Image enhancement.
	CO 3	Understand Image Restoration and Compression
	CO 4	Understand about Image segmentation
CA800301-Introduction to Cyber Security	CO 1	Understand about cyber security fundamentals
	CO 2	Understand about malicious code & counter measures
	CO 3	Understand about security in OS
	CO 4	Understand about threats in network communication
CA010302 - Python Programming	CO 1	To understand why Python is a useful scripting language for developers.
	CO 2	To learn how to design and program Python applications.
	CO 3	To learn how to use lists, tuples, and dictionaries in Python programs
	CO 4	To learn how to identify Python object types.
CA500301 - Software Engineering	CO 1	Understand software engineering concepts and process models.
	CO 2	Understand agile development models and various UML models
	CO 3	Understand various requirement models.
	CO 4	Understand project management, scheduling and risk management.
CA010303 - Lab III [DIP using Python]	CO 1	Practice the Python programming language from its scratch: its syntax, idioms, patterns and styles
	CO 2	Illustrate the essentials of the Python library, and learn how to learn about other parts of the library when you need them
	CO 3	Understand the need for image transforms different types of image transforms and their properties
	CO 4	understand the rapid advances in Machine vision
CA010304 -Mini Project using IOT	CO 1	Identify various hardware components and assemble a PC.
	CO 2	Design and develop IoT based prototypes.
	CO 3	practical application of theoretical knowledge gained in order to develop real time software applications.
	CO 4	To explore the industrial line of work and corporate work culture

CA010401 - Data Mining	CO 1	Understand data mining functionalities.
	CO 2	Understand DataWarehouse & OLAP technology.
	CO 3	Understand varoius classification methods.
	CO 4	Acquire knowledge about clustering methods.
CA800402 - Applied Cryptography	CO 1	properties of modern symmetric ciphers like AES
	CO 2	properties of modern asymmetric ciphers like RSA
	CO 3	properties of hash functions, MACs and digital signatures
	CO 4	properties of hash functions, MACs and digital signature
CA800403 - Ethical Hacking	CO 1	Understand the concepts of Hacking , the necessity of learning Ethical Hacking as a self defence mechanism and the approach of Legal System to Ethical Hacking
	CO 2	Understand the various Vulnerability Analysis techniques.
	CO 3	Aware of Windows Hacking, Network Hacking, Web Hacking and Password Hacking. Also students will be able to understand various Hacking Attack Methods such as SQL injection attacks, DDOS etc. Acquire knowledge about Packet Inspection Firewalls.
	CO 4	Acquire knowledge about various Linux Exploits.
CA010402 - Main Project	CO 1	Demonstrate a sound technical knowledge of their selected project topic
	CO 2	Undertake problem identification, formulation and solution
	CO 3	Design engineering solutions to complex problems utilizing a systems approach.
CA010403 - Course Viva	CO 1	Students should able to face interview both in the academic and the industrial sector
	CO 2	Students should able to get an overall knowledge in the relevant field of computer applications.