DEPARTMENT OF MASTER OF COMPUTER APPLICATION

PROGRAMME: MASTER OF COMPUTER APPLICATION

VISION

- ❖ Build a strong teaching and learning environment that responds swiftly to the global Challenges through the advancement of Knowledge base and exemplary Education.

MISSION

- ❖ To provide quality post graduate education applied Foundations of Computers through Intellectual Transformations
- ❖ To foster the overall Development through Research and Developmental Activities
- ❖ To Empower to Students with global Knowledge and Skills.

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

- ❖ Apply their computing skills to analyse, design and develop innovative software products to meet the industry needs and excel as software professionals.
- ❖ Pursue lifelong learning and do research in the computing field based on solid technical foundations.
- ❖ Communicate and function effectively in teams in multidisciplinary fields within the global, societal and environmental context.
- ❖ Exhibit professional integrity, ethics and an understanding of responsibility to contribute technical solutions for the sustainable development of society.

PROGRAM OUTCOMES (POs)

- ❖ Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- ❖ Problem analysis: Identify, formulate, review research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of

mathematics, natural sciences, and engineering sciences.

❖ Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

❖ Conduct Investigations of Complex Problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

❖ Modern Tool Usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.

❖ The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

❖ Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

❖ Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

❖ Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

❖ Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

❖ Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

❖ Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological

change.

PROGRAM SPECIFIC OUTCOMES (PSOs)

❖ Design, develop and implement interdisciplinary application software projects to meet the demands of industry requirements using modern tools and technologies.

❖ Analyze the societal needs to provide novel solutions through technological based research.

COURSE OUTCOMES (COs)

Regulation	2021
Sem	01
Subject Code	MA4151
Subject Name	Applied Probability and Statistics for Computer Science Engineers
Course Outcome	- Apply the concepts of Linear Algebra to solve practical problems. - Use the ideas of probability and random variables in solving engineering problems. - Be familiar with some of the commonly encountered two dimensional random variables andbe equipped for a possible extension to multivariate analysis. - Use statistical tests in testing hypotheses on data.

Regulation	2021
Sem	01
Subject Code	MC4101
Subject Name	Advanced Data Structures And Algorithms
Course Outcome	- Design data structures and algorithms to solve computing problems. - Choose and implement efficient data structures and

apply them to solve problems.
- Design algorithms using graph structure and various string-matching algorithms to solve real-life problems.
- Design one's own algorithm for an unknown problem.
- Apply suitable design strategy for problem solving.

Regulation	2021
Sem	01
Subject Code	MC4102
Subject Name	Object Oriented Software Engineering
Course Outcome	- Design object oriented software using appropriate process models. Differentiate software processes under waterfall and agile methodology. Design and Develop UML diagrams for software projects. - Apply Design Patterns for a software process. - Categorize testing methods and compare different testing tools for software processes. - Analyze object oriented metrics and quality for software engineering processes.

Regulation	2021
Sem	01
Subject Code	MC4103
Subject Name	Python Programming

Course Outcome	• Develop algorithmic solutions to simple computational problems Represent compound data using Python lists, tuples and dictionaries.
	• Read and write data from/to files in Python Programs
	• Structure simple Python programs using libraries, modules etc. Structure a program by bundling related properties and behaviors into individual objects.

Regulation	2021
Sem	01
Subject Code	MC4104
Subject Name	Fundamentals Of Accounting
Course Outcome	• Able to understand the basic concepts of accounting standards.
	• Able to understand the process of maintaining Accounts in an organization
	• Helps to understand and calculating the financial position of an organization
	• Helps to understand Financial Management concepts and its components
	• It helps to understand the importance of BRS and generation of various financial reports

Regulation	2021
Sem	01
Subject Code	MC4101

Subject Name	Advanced Data Structures And Algorithms Laboratory
Course Outcome	• Design and implement basic and advanced data structures extensively • Design algorithms using graph structures • Design and develop efficient algorithms with minimum complexity using designtechniques • Develop programs using various algorithms. • Choose appropriate data structures and algorithms, understand the ADT/libraries,and use it to design algorithms for a specific problem

Regulation	2021
Sem	01
Subject Code	MC4112
Subject Name	Python Programming Laboratory
Course Outcome	• Apply the Python language syntax including control statements, loops and functions to solve a wide variety of problems in mathematics and science. • Use the core data structures like lists, dictionaries, tuples and sets in Python to store, process and sort the data • Create files and perform read and write operations • Illustrate the application of python libraries. • Handle exceptions and create classes and objects for any real time applications

Regulation	2021
Sem	02
Subject Code	MC4201
Subject Name	Full Stack Web Development
Course Outcome	• Write client side scripting HTML, CSS and JS. • Implement and architect the server side of the web application. • Implement Web Application using NodeJS. • Architect NoSQL databases with MongoDB. • Implement a full-stack Single Page Application using React, NodeJS and MongoDB and deploy on Cloud

Regulation	2021
Sem	01
Subject Code	MC4113
Subject Name	Communication Skills Enhancement – I
Course Outcome	• Listen and comprehend lectures in English Articulate well and give presentations clearly Participate in Group Discussions successfully Communicate effectively in formal and informal writing Write proficient essays and emails

Regulation	2021
Sem	02
Subject Code	MC4202
Subject Name	Advanced Database Technology

Course Outcome	• Design a distributed database system and execute distributed queries. Manage Spatial and Temporal Database systems and implement it in corresponding applications.
	• Use NoSQL database systems and manipulate the data associated with it.
	• Design XML database systems and validate with XML schema.
	• Apply knowledge of information retrieval concepts on web databases.

Regulation	2021
Sem	02
Subject Code	MC4203
Subject Name	Cloud Computing Technologies
Course Outcome	• Use Distributed systems in Cloud Environment.
	• Articulate the main concepts, key technologies, strengths and limitations of Cloud computing.
	• Identify the Architecture, Infrastructure and delivery models of Cloud computing.
	• Install, choose and use the appropriate current technology for the implementation of Cloud.
	• Adopt Micro services and DevOps in Cloud environments

Regulation	2021
Sem	02
Subject Code	MC4204
Subject Name	Mobile Application Development

Course Outcome	• Understand the basics of mobile application development frameworks and tools.
	• Develop a UI for mobile applications.
	• Design mobile applications that manage memory dynamically.
	• Build applications based on mobile OS like Android, iOs.
	• Build location based services.

Regulation	2021	
Sem	02	
Subject Code	MC4205	
Subject Name	Cyber Security	
Course Outcome	• Develop a set of risk and security requirements to ensure that there are no gaps in an organization's security practices	
	• Achieve management, operational and technical means for effective cyber security.	
	• Audit and monitor the performance of cyber security controls.	
	• Spot gaps in the system and devise improvements.	
	• Identify and report vulnerabilities in the system	

Regulation	2021	
Sem	02	PROFESSIONAL ELECTIVE-I
Subject Code	MC4001	
Subject Name	Software Project Management	

Course Outcome	• Understand the activities during the project scheduling of any software application.
	• Learn the risk management activities and the resource allocation for the projects.
	• Apply the software estimation and recent quality standards for evaluation of the software projects
	• Acquire knowledge and skills needed for the construction of highly reliable software project
	• Create reliable, replicable cost estimation that links to the requirements of project planning and managing

Regulation	2021
Sem	02
Subject Code	MC4211
Subject Name	Advanced Database Technology Laboratory
Course Outcome	• Design and implement advanced databases.
	• Use big data frameworks and tools.
	• Formulate complex queries using SQL.
	• Create an XML document and perform Xquery.
	• Query processing in Mobile databases using open source tools.

Regulation	2021
Sem	02
Subject Code	MC4212
Subject Name	Full Stack Web Development Laboratory
Course Outcome	• To implement and deploy the client side of the web application.
	• To develop and deploy server side applications using NodeJS.
	• To use Express framework in web development.
	• To implement and architect database systems in both NoSQL and SQL environments.
	• To develop a full stack single page application using React, NodeJS, and a Database and deploy using containers.

Regulation	2021
Sem	02
Subject Code	MC4213
Subject Name	Communication Skills Enhancement - II
Course Outcome	• Students will be able to make presentations and participate in Group discussions with confidence.
	• Students will be able to perform well in the interviews.
	• Students will make effective presentations.

Regulation	2021

Sem	03
Subject Code	MC4301
Subject Name	Machine Learning
Course Outcome	• Understand about Data Preprocessing, Dimensionality reduction Apply proper model for the given problem and use feature engineering techniques Make use of Probability Technique to solve the given problem. • Analyze the working model and features of Decision tree • choose and apply appropriate algorithm to learn and classify the data

Regulation	2021
Sem	03
Subject Code	MC4302
Subject Name	Internet Of Things
Course Outcome	• Define the infrastructure for supporting IoT deployments Understand the usage of IoT protocols for communication between various IoT devices • Design portable IoT using Arduino/Raspberry Pi /equivalent boards. • Understand the basic concepts of security and governance as applied to IoT • Analyze and illustrate applications of IoT in real time scenarios

Regulation	2021	
Sem	03	PROFESSIONAL ELECTIVE-II
Subject Code	MC4015	
Subject Name	Digital Marketing	
Course Outcome	- To gain insight on the concept of digital marketing and the role of a digital manager. - To understand and administer the website and the search engines. - To understand how to use MISC and Google Webmaster tools. - To understand the concepts of lead management and digital marketing. - To gain knowledge on the latest digital marketing trends	

Regulation	2021	
Sem	03	PROFESSIONAL ELECTIVE-III
Subject Code	MC4020	
Subject Name	Data Mining And Data Warehousing Techniques	
Course Outcome	- Identify data mining techniques in building intelligent model. - Illustrate association mining techniques on transactional databases. - Apply classification and clustering techniques in real world applications. - Evaluate various mining techniques on complex data objects. - Design, create and maintain data warehouses	

Regulation	2021	
Sem	03	PROFESSIONAL ELECTIVE-IV
Subject Code	MC4025	
Subject Name	Big Data Analytics	
Course Outcome	- Able to apply Hadoop for analyzing Big Volume of Data - Able to access ,store , do operations on data as Files and directories - Able to implement MapReduce Concept in analyzing BigData - Able to implement event streaming using Kafka API - Able to access volume of data with Hadoop Framework	