# DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS

## **REGULATION – 2013**

# **COURSE OUTCOMES (CO)**

# MA7151 MATHEMATICAL FOUNDATIONS FOR COMPUTER APPLICATIONS

MA7151.1	Explain the concepts and methodologies in matrices needed for designing and solving problems
MA7151.2	Explain the various types of set operations and classification of sets with Relation, Functions
MA7151.3	Demonstrate various laws of Logic and implementing in conversion and logical operations on
	predicate calculus needed for computing skill
MA7151.4	Outline the Basics of Grammar and classifications of formal languages to the engineering areas
	like Compiler Design
MA7151.5	Conversion of DFA to NFA to design discrete problems to solve by computers

#### MC7101 COMPUTER ORGANIZATION

MC7101.1	Able to design digital circuits by simplifying the Boolean functions and K-Maps
MC7101.2	To know the concepts of combinational and sequential circuits
MC7101.3	To understand the basic structure of computers
MC7101.4	Able to design the Processor
MC7101.5	Acquire knowledge about multiprocessor organization and parallel processing

## MC7102 PROBLEM SOLVING AND PROGRAMMING

MC7102.1	Understand the concept of Problem Solving Approaches. Able to solve simple and complex
	problems.
MC7102.2	Understand the basic concepts of building blocks. Different types of computer languages.
MC7102.3	Able to write simple programs in C and understand operators and statements in C.
MC7102.4	Understand array, strings Functions and Pointers
MC7102.5	Understand Structures and Files

#### MC7103 DATABASE MANAGEMENT SYSTEMS

MC7103.1	To understand DBMS architecture and data models
MC7103.2	To know the relational database design and normalization of tables
MC7103.3	To understand transaction processing, Locking techniques and recovery mechanisms
MC7103.4	To know file operations, indexing and hashing techniques
MC7103.5	To impart knowledge about various databases such as object oriented, object relational,
	spatial, temporal and mobile databases

#### MC7104 DATA STRUCTURES AND ALGORITHMS

MC7104.1	Able to select and apply the data structure to suit any given problem
MC7104.2	Able to design their own data structure according to the application need
MC7104.3	Able to apply the algorithm design techniques to any of the real world problem
MC7104.4	Able to develop any new application with the help of data structures and algorithms
MC7104.5	Able to write efficient algorithm for a given problem and able to analyze its time complexity

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# MC7201 OBJECT ORIENTED PROGRAMMING

MC7201.1	Understand the basic concepts of Object Oriented Programming
MC7201.2	Understand the concept of class protection mechanism to provide security
MC7201.3	Able to reuse the code with extensible Class types, User-defined operators and function
	overloading
MC7201.4	Understand and implement the features of C++ including templates, exceptions and file
	handling
MC7201.5	Understand the concepts of virtual functions to implement polymorphism

#### MC7202 WEB PROGRAMMING ESSENTIALS

MC7202.1	To understand the concepts of Internet Standards, architecture of the World Wide Web,
	Protocols and HTTP
MC7202.2	To understand and practice Markup language and Cascading Style sheet
MC7202.3	To understand and practice scripting on client side Programming, Document Object Model and
	Validations on forms
MC7202.4	To understand and practice Object oriented concept on Scripting, JSON, JQuery and Ajax
MC7202.5	To understand and practice the concept of PHP on server side Programming, connection of PHP
	with MySql, and creation of website, using all the web development techniques

#### MC7203 SYSTEM SOFTWARE

MC7203.1	To understand the basic machine architectures and various assembler functions
MC7203.2	To understand the lexical, syntax, semantic analysis process and understand the different
	components of compiler and their functioning
MC7203.3	To determine the code generation and optimization techniques and to understand the use of
	context free grammar
MC7203.4	To identify the algorithms and data structures for linking loaders and understand the machine
	dependant loader features and its design options
MC7203.5	To know about Macro processor with its algorithm and data structures and various other system
	software

#### MC7204 OPERATING SYSTEMS

MC7204.1	To be aware of the evolution and fundamental principles of operating system	
MC7204.2	To understand the various operating system components like process management,	
MC7204.3	To understand the various memory management	
MC7204.4	To know about file management and the distributed file system concepts in operating systems	
MC7204.5	To be aware of components of operating system with relevant case study	

## MC7205 COMPUTER GRAPHICS AND MULTIMEDIA

MC7205.1	To gain proficiency in 3D computer graphics API Programming		
MC7205.2	To enhance the perspective of modern computer system with modeling, analysis and		
	interpretation of 2D and 3D visual information		
MC7205.3	Able to understand different realizations of multimedia tools		
MC7205.4	Able to develop interactive animations using multimedia tools		
MC7205.5	To gain the knowledge of different streams in multimedia transmission		

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# **COURSE OUTCOMES (CO)**

# MC7301 COMPUTER NETWORKS

MC7301.1	Explain the Components requirement of networks and Link Layer Services
MC7301.2	Classify the Media Access Control Protocols and different Internetworking
MC7301.3	Demonstrate various types of routing techniques
MC7301.4	Outline the mechanisms involved in Transport Layer
MC7301.5	Experiment with different application layer protocols and security

## MC7302 EMBEDDED SYSTEMS

MC7302.1	Able to understand the functionality of 8085 microprocessor
MC7302.2	Able to design and control real time control systems
MC7302.3	Able incorporate enhanced features in the embedded systems through software
MC7302.4	Able to rectify minor problems by troubleshooting
MC7302.5	Acquire the knowledge of real time operating system and implement real time functions

## MC7303 SOFTWARE ENGINEERING

MC7303.1	The different categories of risks and risk activities
MC7303.2	The classification of metrics and how to measure the products.
MC7303.3	The software testing techniques and strategies.
MC7303.4	The different versions of software and software maintenance.
MC7303.5	The configuration identification and change control.

## MC7304 PROFESSIONAL ETHICS

MC7304.1	Able to understand the concepts of computer ethics in work environment
MC7304.2	Able to know the intellectual property Rights
MC7304.3	Understand the Risk Benefit analysis and professional Issues
MC7304.4	Able to know the use of software, computers and internet based tools
MC7304.5	Able to understand the cyber bulling, cyber Stalking, Online Virtual world and Digital Rights
	Management.

## MC7305 INTERNET PROGRAMMING

MC7305.1	To Understand the internet standards, its purpose and its various applications in the present
	scenario
MC7305.2	To know the basic structures of writing Java Programs such as Classes, Objects, Methods and
	the way to implement Object-Oriented Programming Characteristics
MC7305.3	To get concrete idea of creating packages and various event handling mechanisms using
	graphical interfaces.
MC7305.4	To enhance the knowledge in the advanced level of java by connecting databases and calling
	remote methods from network neighborhoods
MC7305.5	To be able to create network programs for various purposes like chatting, sending and receiving
	packets and also able to run java bean components.

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# **COURSE OUTCOMES (CO)**

# MC7401 RESOURCE MANAGEMENT TECHNIQUES

MC7401.1	Implementing various techniques in solving LPP
MC7401.2	Finding IBFS and optimum solution for Transportation and Assignment problems
MC7401.3	Applying various techniques in finding integer solution for the LPP
MC7401.4	Drawing diagram of network diagram and find Critical Path
MC7401.5	Applying various techniques in queuing Models

## MC7402 OBJECT ORIENTED ANALYSIS AND DESIGN

MC7402.1	To understand the basic structure of Classes, Objects, relationship of objects and the need of
	Object Oriented development of software
MC7402.2	To create concrete idea on the Methodologies of developing Object-oriented software products
	using UML Diagrams
MC7402.3	To identify and analysis the users' needs and requirements of the product with the help of Use
	Case Diagrams and effective documentation techniques
MC7402.4	To develop software products by reflecting transformation of users' need into the real
	operational system
MC7402.5	To refine the detailed design with various testing techniques to satisfy the users' need and
	satisfaction

## MC7403 DATA WAREHOUSING AND DATA MINING

MC7403.1	Construct data warehouse models and perform OLAP operations
MC7403.2	Pre process the data using stages of knowledge discovery process and use Data Mining for
	decision making purpose
MC7403.3	Apply Association rules for mining the data
MC7403.4	Make use of various classification and prediction techniques for data retrieval purpose
MC7403.5	Make use of appropriate clustering technique for grouping objects

#### MC7404 NETWORK PROGRAMMING

MC7404.1	Explain the IPC Mechanisms in UNIX
MC7404.2	Explain the basics of Socket Programming
MC7404.3	Demonstrate TCP Client Server Communication
MC7404.4	Outline the UDP Client Server Communication
MC7404.5	Build Network applications

## MC7005 SECURITY IN COMPUTING

MC7005.1	Construct cryptographic algorithms for encrypting and decryption to secure data transmission
MC7005.2	Identify project flaws, dangerous of software errors and rectifying by good coding
MC7005.3	Apply the Threats for Data transmission in Networks
MC7005.4	Make use of the requirements to secure the data in databases
MC7005.5	Make use of Different models and Standards of network security architecture

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## MC7501 WEB APPLICATION DEVELOPMENT

MC7501.1	Knows how to design and implement Internet systems
MC7501.2	Able to understand functionality of Internet system
MC7501.3	Able to design a system according to customer needs using the available Internet technologies
MC7501.4	Able to Design and develop interactive, client-side, server-side executable web applications.
MC7501.5	Explore the features of various platforms and frameworks used in web applications development

#### MC7502 SERVICE ORIENTED ARCHITECTURE

MC7502.1	To understand the basic characteristics of SOA and comparing SOA to client-server and
	Distributed architectures
MC7502.2	To create concrete idea on the Methodologies of developing web services by understanding the
	basic structure of XML document, Schema and XSLT
MC7502.3	To gain knowledge about SOAP, UDDI and XML to create web services
MC7502.4	To understand the architecture of J2EE and .NET
MC7502.5	To gain knowledge about the Cloud computing architecture and services

#### MC7503 MOBILE COMPUTING

MC7503.1	To learn the fundamentals of Wireless Communication
MC7503.2	To have an exposure about Wireless short range Networks
MC7503.3	To learn the Network Layer, Transport Layer of Mobile Communication
MC7503.4	To understand the concepts of Adhoc and Sensor Networks
MC7503.5	To impart knowledge about Mobile Application Development

## MC7009 HUMAN RESOURCE MANAGEMENT

MC7009.1	To understand the Fundamentals of HRM in Global Environment
MC7009.2	To know about the Job Analysis, Selection and Recruiting Process
MC7009.3	To understand the stages of employee socialization, Training and Development Needs
MC7009.4	To know about the Performance Evaluation and to Establish Rewards, Pay Plans and Employee
	Benefits
MC7009.5	To Ensure a Safe and Healthy work Environment in Organization

#### MC7015 SOFTWARE PROJECT MANAGEMENT

MC7015.1	To understand the activities during the project scheduling of any software application
MC7015.2	To learn the risk management activities and the resource allocation for the projects
MC7015.3	To apply the software estimation and recent quality standards for evaluation of the software
	projects
MC7015.4	To Acquire knowledge and skills needed for the construction of highly reliable software project
MC7015.5	Able to create reliable, replicable cost estimation that links to the requirements of project
	planning and managing