Department of Computer Application

PROGRAMME NAME : *B.C.A*

PROGRAMME OUTCOMES :

PO 1	Computational information: Appreciate and apply mathematical organization, computing and domain information for the conceptualization of computing models from clear harms.
PO 2	Difficulty Analysis: Talent to classify, significantly evaluate and prepare complex computing problems using fundamentals of computer knowledge and request domains.
PO 3	Accomplish Investigations of Compound Computing Troubles: Ability to invent and ways experiments interpret data and present well up to date conclusions.
PO 4	Current Implement Procedure: Skill to select recent computing tools, skills and techniques compulsory for original software solutions
PO 5	Proficient Principles: Facility to apply and give expert principles and cyber systems in a universal monetary situation.
PO 6	Modernization and Private Enterprise: Classify opportunities, private enterprise dream and use of original thoughts to build worth and means for the betterment of the human being and the world.

SL. NO.	COURSE NAME	COURSE OUTCOME	
1	Semester – I / Core Programming in C	CO 1	To understand basic understanding of computers and programming syntax.
		CO 2	To explore basic understanding of computers and programming syntax.
		CO 3	To implement standard libraries, operators, functions and arrays.
		CO 4	To create C programming with features like pointers and structures.
		CO 5	To implement various file handling techniques.

2	Semester – I / Allied DIGITAL DESIGN	CO 1	Definition of digital logics and Circuits(K1)
		CO 2	Understand about the digital devices (K2)
		CO 3	Understand about digital arithmetic circuits(K2)
		CO 4	Acquire Knowledge on basics of Gates and its Applications(K4)
		CO 5	Have the necessary understanding on Registers for Counting Applications (K4)
3	Semester – II / Core OBJECT ORIENTED PROGRAMMING WITH C++	CO 1	Define complete overview of Data types, functions, control statements and pointers.
		CO 2	Apply Object Oriented Programming Concepts.
		CO 3	Demonstrate the use of virtual functions to implement polymorphism.
		CO 4	Demonstrate Function Overloading and Operator Overloading concepts
		CO 5	Illustrate Templates, Files and Exception Handling.
4	Semester – II / Allied MATHEMATICAL FOUNDATION FOR COMPUTER SCIENCE	CO 1	Ability to apply mathematical logic to solve problems.
		CO 2	Understand sets, relations, functions, and discrete structures.
		CO 3	Able to use logical notation to define and reason about fundamental mathematical concepts such as sets, relations, and functions.
		CO 4	Able to model and solve real-world problems using graphs and trees.

5	Semester – III JAVA PROGRAMMING	CO 1	To get knowledge of the structure and model of the Java programming language.
		CO 2	To understand how to design applications with threads in Java.
		CO 3	To get Knowledge for developing software in the Java programming language.
		CO 4	To learn how to use exception handling in Java applications.
		CO 5	To use the Java programming language for various programming technologies.
6	CORE SUBJECT – II FINANCIAL ACCOUNTING	CO 1	To acquire knowledge about general aspects of business operations.
		CO 2	To explain the concepts and procedures of financial reporting, including income and expenditure statement, balance sheet etc.
		CO 3	To locate and analyze financial data from annual reports of corporations.
7	DATA STRUCTURES	CO 1	An understanding of the basic data structures.
		CO 2	To describe Data structures like stack, queue, tree and graph.
		CO 3	An understanding of the basic search and sort algorithms.
		CO 4	The appropriate use of a particular data structure and algorithm to solve a problem.
8	SKILL BASED CORE THEORY – I PROGRAMMING WITH PHP & MYSQL	CO 1	To observe and understand the role, structure, control flow, classes and concepts in PHP and tables in MySQL
		CO 2	To implement the concepts in PHP and queries in MySQL.
		CO 3	To analyze functions for data and file handling in PHP and data management in MySQL

		CO 4	To evaluate the programming concepts in PHP to develop interfaces and manipulate data using MySQL.
		CO 5	To create applications using PHP and MySQL
9	INTRODUCTION TO INFORMATION TECHNOLOGY	CO 1	To understand the architecture of the computer.
		CO 2	To know about internet & its applications.
		CO 3	To understand and define about the current trends in IT.
10	INTRODUCTION TO COMPUTERS	CO 1	To understand the meaning and basic components of a computer system.
		CO 2	To define and distinguish Hardware and Software components of computer system.
		CO 3	To understand the memory and storage devices and types of Operating system.

PROGRAMME NAME : *M.C.A*

PROGRAMME OUTCOMES

PO - 1	Ability to apply the knowledge of computing techniques and other related Specialisation for the abstraction and conceptualisation of computing models From the user requirements
PO - 2	Ability to select modern computing tools and techniques and use them Confidently
PO - 3	Ability to transform complex business challenges into well-defined problems, Investigate, understand and propose integrated solutions using emerging Technologies
PO - 4	Ability to understand the impact of system solutions in a contemporary, Global, economic, environmental, and societal context for sustainable Development
PO - 5	Ability to function professionally with ethical responsibility as an individual as well as in multidisciplinary teams with positive attitude
PO - 6	Ability to communicate the technical information effectively both orally and Practically
PO - 7	Ability to appreciate the importance of goal setting and to recognize the need For life- long learning
PO - 8	Ability to work collaboratively as a member or a leader in multidisciplinary teams

SL. NO	COURSE NAME	COURSE OUTCOME	
1	MATHEMATICAL FOUNDATIONS FOR COMPUTER SCIENCE	CO1	Apply the fundamentals of set theory and matrices for the given problem
		CO2	Apply the types of distribution, evaluate the mean and variance for the given case study/ problem
		CO3	solve the given problem by applying the Mathematical logic concepts
		CO4	Model the given problem by applying the concepts of graph theory
		CO5	Identify and list the different applications of discrete mathematical concepts in computer science.

2	COMPUTER ORGANIZATION AND ARCHITECTURE	CO1	Understand the functional units of a computer, bus structures and addressing.
		CO2	Analyze RAM, ROM, and cache memory and virtual memory concepts.
		CO3	Evaluate the modes.
		CO4	Know about single bus, multiple bus organization.
		CO5	Design and analyze the pipelining concepts and various I/O interfaces
3	DESIGN AND ANALYSIS OF ALGORITHMS USING C++	CO1	It gives stepwise procedure to solve problems
		CO2	The Problems can be broken down into small pieces for program development
		CO3	Efficient approach of solving problems by a model of computations
4	ADVANCED JAVA PROGRAMMING	CO1	Able to write java programs
		CO2	Understand the importance of JDBC
		CO3	Apply the Java programming techniques for providing the solution for the practical problems
5	OBJECT ORIENTED ANALYSIS AND DESIGN USING UML	CO1	Analyze the Systems Development Life Cycle
		CO2	Identify the basic software requirements UML Modeling
		CO3	Apply software design with UML diagrams
		CO4	Develop applications using UML
6	ADVANCED JAVA PROGRAMMING	CO1	Able to write java programs
		CO2	Understand the importance of JDBC
		CO3	Apply the Java programming techniques for providing the solution for the practical problems
7	OBJECT ORIENTED ANALYSIS AND DESIGN USING UML	CO1	Analyze the Systems Development Life Cycle
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		CO3	Apply software design with UML diagrams
		CO4	Develop applications using UML

8	FINANCIAL AND MANAGEMENT ACCOUNTING	CO1	Perform the accounting analysis
		CO2	Explain the basic features and issues in accounting.
		CO3	Prepare the financial statements.
9	MACHINE LEARNING USING PYTHON	CO1	Have a good understanding of the fundamental issues and challenges of machine learning: data, model selection, model complexity, etc
		CO2	Appreciate the underlying mathematical relationships within and across Machine Learning algorithms and the paradigms of supervised and un-supervised learning.
		CO3	Be able to design and implement various machine learning algorithms in a range of real-world applications
10	ADVANCED WEB TECHNOLOGY	CO1	Design a web page with Web form fundamentals and web control classes
		CO2	Recognize the importance of validation control, cookies and session
		CO3	Apply the knowledge of ASP.NET object, ADO.NET data access and SQL to develop a client server model
		CO4	Recognize the difference between Data list and Data grid controls in accessing data.
11	ADVANCED DATABASE MANAGEMENT SYSTEM	CO1	Know about the Various Data models and Works on Database Architecture
		CO2	Knowledge patterns, Object Oriented Databases are well equipped
		CO3	Able to understand the database activities such as recovery, administration, backup, etc
12	DISTRIBUTED OPERATING SYSTEM	CO1	Clear understanding on several resource management techniques like distributed shared memory and other resources
		CO2	Able to design and implement algorithms of distributed shared memory and commit protocols
		CO3	Able to design and implement fault tolerant distributed systems

13	2.CLOUD COMPUTING	CO1	Compare the strengths and limitations of cloud computing
		CO2	Identify the architecture, infrastructure and delivery models of cloud computing
		CO3	Address the core issues of cloud computing such as security, privacy and interoperability.
14	3. SOFT COMPUTING	CO1	Learn about soft computing techniques and their applications
		CO2	Analyze various neural network architectures Implement machine learning through neural networks
		CO3	Understand perceptrons and counter propagation networks
		CO4	Understand fuzzy concepts and develop a fuzzy expert system to derive decision
		CO5	Analyze the genetic algorithms and their applications and able to write genetic algorithms to solve optimization problem
15	CYBERSECURITY	CO1	Analyze and evaluate the cyber security needs of an organization
		CO2	Determine and analyze software vulnerabilities and security solutions to reduce the risk of exploitation.
		CO3	Measure the performance and troubleshoot cyber security systems
16	DATA SCIENCE & ANALYTICS	CO1	Understand the need for the big data analytics
		CO2	Appreciate the effectiveness of the techniques and algorithms that are available for handling big data
		CO3	Apply the data analytic techniques for their data analysis
17	ADVANCED DIGITAL IMAGE PROCESSING	CO1	Review the fundamental concepts of a digital image processing system and Analyze images in the frequency domain using various transforms
		CO2	Evaluate the techniques for image enhancement and image restoration. Categorize various compression techniques.

		CO3	Interpret Image compression standards, and Interpret image segmentation and representation techniques
18	PRINCIPLES OF COMPILER DESIGN	CO1	Use the knowledge of patterns, tokens & regular expressions for solving a problem in the field of data mining
		CO2	Understand the application of finite state machines, recursive descent, production rules, parsing, and language semantics
		CO3	Analyze & implement required module, which may include front-end, back-end, and a small set of middle-end optimizations
19	RESEARCH METHODOLOGY	CO1	Ability to apply different research approaches and methodologies Construct and document an appropriate research design
		CO2	Effectively apply the appropriate computer tools in each stage of research Ability to perform ICT based Teaching Methods
20	OPTIMIZATION TECHNIQUES	CO1	Apply problem solving techniques through OR approaches
		CO2	Formulate the problem using linear programming technique
		CO3	To analyze the optimal solution for the given problem by applying Transportation problems.
		CO4	To analyze the strategies with different players through game theory approach.
		CO5	To analyze the sequence of jobs to be executed by machines for the given problem.