DEPARTMENT OF COMPUTER SCIENCE

PROGRAMME OUTCOMES AND COURSE OUTCOMES OF UNDER

GRADUATE & POST GRADUATE PROGRAMME (2024 ONWARDS)

NAME OF THE PROGRAMME: BACHELOR OF COMPUTER SCIENCE PROGRAMME OUTCOME	
PO1	**Knowledge:** Think in a critical and logical based manner
PO2	**Problem Analysis:** Familiarize the students with suitable software tools of computer science and industrial applications to handle issues and solve problems in mathematics or statistics and real-time application related sciences**.**
PO3	**Design / Development of Solutions:** Know when there is a need for information, to be able to identify, locate, evaluate, and effectively use that information for the issue or problem at hand**.**
PO4	**Conduct investigations of complex problems:** Understand, formulate, develop programming model with logical approaches to a Address issues arising in social science, business and other contexts.
PO5	**Modern tool usage:** Acquire good knowledge and understanding to solve specific theoretical and applied problems in advanced areas of Computer science and Industrial statistics.
PO6	**Applying to society:** Provide students/learners sufficient knowledge and skills enabling them to undertake further studies in Computer Science or Applications or Information Technology and its allied areas on multiple disciplines linked with Computer Science.
PO7	**Employment:** Equip with Computer science technical ability, problem solving skills, creative talent and power of communication necessary for various forms of employment.
PO8	**Employment & Internship activities:** Develop a range of generic skills helpful in employment, internships& societal activities.
PO9	**Aspects of Computer Science**: Get adequate exposure to global and local concerns that provides platform for further exploration into multi-dimensional aspects of computing sciences.

	NAME OF THE PROGRAMME: B.Sc Computer Science – COURSE OUTCOMES
	SEMESTER I
Programming in C	1. Describe the fundamentals of C programming Language. 2. Apply appropriate Control structures to solve problems. 3. Describe the concept of Arrays and Strings 4. Write User defined functions and apply concept of recursion to solve problems. 5. Describe the concept of Pointers and Structures
C Programming Lab	1. Understand the logic for a given problem. Write the algorithm of a given problem. 2. Recognize and understand the syntax and construction of C programming code. Gain experience of procedural language programming. Know the steps involved in compiling, linking and debugging C code. 3. Understand using header files. Learn the methods of iteration or looping and branching. Make use of different data-structures like arrays, pointers, structures and files. Understand how to access and use library functions. 4. Understand function declaration and definition. Understand proper use of user defined functions. Write programs to print output on the screen as well as in the files. 5. Apply all the concepts that have been covered in the theory course, and know the alternative ways of providing solution to a given problem.

NUMERICAL METHODS - I	1. Solve the problems of fitting of straight lines, parabolas and the different form of exponential curves. 2. Solve algebraic equations using various methods like Bisection method, Iteration method, Regula Falsi method and Newton – Rap son method. 3. Estimate the solution of simultaneous linear equations using different numerical methods. 4. Define basic concept of operators Δ, ∇ and E, Solving interpolation with equal intervals 5. problems using Gregory Newton's forward formula and Newton's backward formula 6. Estimate the solution of central difference formula using the methods Gauss forward, backward formula, Stirling's formula and Bessel′s formula.
SEC-1 **Office Automation**	1. Possess the knowledge on the basics of computers and its components 2. Gain knowledge in Creating Documents, spreadsheets and presentations. 3. Demonstrate an understanding of different automation tools. 4. Learn the concepts of Database and implement the Query in Database. 5. Utilize the automation tools for documentation, calculation and presentation purpose.

Internet And Web Development	1. The Students will able to understand the concepts basic of internet. 2. The Students will develop an understanding of internet technology and online threats. 3. To introduce the fundamentals of HTML, and the principles of web design. 4. The students will able to apply CSS rules to HTML elements such as color, size, font, spacing, and positioning. 5. The students will be able to construct basic web page design using HTML & CSS.
Digital Computer Fundamentals	1.Identify the logic gates and their functionality 2.Perform number conversions from one system to another system 3.Design basic electronic circuits (combinational circuits) 4.Perform a comparative analysis of the components of different memory units 5.Perform number conversions

NAME OF THE PROGRAMME: MASTER OF COMPUTER SCIENCE- PROGRAMME OUTCOME	
PO1	Acquire knowledge in computer science to apply the knowledge in their day-to-day life for betterment of self and society.
PO2	Develop critical, analytical thinking and problem-solving skills.
PO3	Develop research related skills in defining the problem, formulate and test the hypothesis, analyze, interpret, and draw conclusion from data.
PO4	Address and develop solutions for societal and environmental needs of local, regional and national development.

PO5	Work independently and engage in lifelong learning and enduring proficient progress.
PO6	Provoke employability and entrepreneurship among students along with ethics and communication skills.
PO7	Understand the importance of ethical behavior in business contexts and be able to recognize and address ethical dilemmas they may encounter in their professional careers.
PO8	Prepared for lifelong learning and professional development, including the ability to adapt to changes in technology, business practices, and economic conditions throughout their careers.

NAME OF THE PROGRAMME: MASTER OF COMPUTER SCIENCE- COURSE OUTCOME
SEMESTER I

Principles Of Compiler Design	1.Understand the phases and tools available in Compiler 2. Design and implement a Lexical Analyzer 3. Compare and analyze different types of Compilers 4.Specify appropriate translations to generate Intermediate Code Identify sources for Code Optimization
Analysis And Design Of Algorithms	1.Get knowledge about algorithms and determine their time complexity 2.Demonstrate specific search and sort algorithms using divide and conquer technique 3. Gain good understanding of Greedy method and its algorithm 4.Able to describe about graphs using dynamic programming technique 5.Explore the traversal and searching technique and apply it for trees and graphs 5.Demonstrate the concept of backtracking & branch and bound technique

Analysis And Design Of Algorithm Lab	1. Implement classic algorithms like Binary Search, Merge Sort, and Quick Sort, showcasing their ability to apply programming skills to solve specific computational tasks. 2. By performing operations on Stack and Queue, students will demonstrate their ability to apply knowledge of data structures to manipulate and manage data efficiently. 3. Through programs for Merge Sort and Quick Sort, students will analyze and compare the efficiency of sorting algorithms based on their time complexity and execution speed. 4. Solving the Tower of Hanoi problem will require students to apply recursive thinking, demonstrating their ability to break down complex problems into simpler sub-problems. 5. Evaluate the effectiveness of using greedy methods in solving problems such as the Knapsack Problem, considering both algorithmic efficiency and solution optimality
Advanced Python Programming	1.Understand the basic concepts of Python Programming 2.Understand File operations, Classes, and Objects 3.Acquire Object Oriented Skills in Python 4.Understanding the Concepts of Machine Learning 5.Understanding the key algorithm of machine learning
Machine Learning using Python Lab	1.Able to write programs in Python using OOPS concepts 2.To understand the concepts of File operations and Modules in Python 3.Implementation of lists, dictionaries, sets and tuples as programs 4.Effectively use the various machine learning tools 5.Design Python programs for various machine learning algorithms

Cloud Computing	1.To understand the principles and paradigm of Cloud Computing 2.Ability to design and deploy Cloud Infrastructure 3.Understand cloud security issues and solutions 4.Ability to understand role of Virtualization Technologies 5.Design & develop backup strategies for cloud data based on features
Human Rights	1.The student will be able to know the nature of human rights its origin , the theories, the movements in the march of human rights and the facets of future of human rights. 2.The student will be able to know the international dimension of human rights, the role of UN and the global effort in formulating conventions and declarations 3.The student will be able to Perceive the regional developments of human rights in Europe , Africa and Asia and the enforceable value of human rights in international arena. 4.The student will be able to have knowledge on the human rights perspectives in India, more developed by its constitution and special legislations 5.The student will be able to know the redressal mechanism made available in case of human rights violation confined to India.