B.SC COMPUTER SCIENCE - COURSE OUTCOME

Course Name	Course Outcome
Core & Practical Problem Solving techniques using	This course emphasizes solving problems using the language, and introduces standard programming techniques like alternation, iteration and recursion. It will briefly glimpse the basics of software engineering practices like modularization, commenting, and naming conventions which help in collaborating and programming in teams. This course is enabled the students to formulate algorithms for arithmetic and logical problems, convert these algorithms to C language programs.
Specific Core & Practical Data Structures & Algorithms	Understand the concept of Dynamic memory management, data types, algorithms, Big O notation. Understand basic data structures such as arrays, linked lists, stacks and queues. Describe the hash function and concepts of collision and its resolution methods. Solve problem involving graphs, trees and heaps. Apply Algorithm for solving problems like sorting, searching, insertion and deletion of data
Core & Practical DBMS	Explain the basic processing and optimization techniques for high level query. Describe different transaction processing concepts and use different concurrency control techniques. Discuss different types of databases such as object oriented and distributed databases. Identify different types of database failures and techniques to recover from such failures. Discuss advanced database technologies and products used in enterprise.
Specific Core & Practical Computer Graphics	To gain knowledge about the computer graphics and their hardware and software systems used to make these images. To Recognize and evaluate critical and aesthetic issues within computer graphics and the mixed media. To be able to describe the general software architecture of programs that use 3D computer graphics. The task of producing photo-realistic images is an extremely complex one, but this is a field that is in great demand because of the nearly limitless variety of applications. To Apply aesthetic judgments and critical thinking skills to art and graphics related issues.

Core & Practical Operating System	Understand the basics of operating systems like kernel, shell, types and views of operating systems. Describe the various CPU scheduling algorithms and remove deadlocks. Explain various memory management techniques and concept of thrashing. Use disk management and disk scheduling algorithms for better utilization of external memory. Recognize file system interface, protection and security mechanisms. Demonstrate the installation process of various operating systems. Implement virtualization by installing Virtual Machine software. Apply UNIX/LINUX operating system commands. Understand different UNIX/LINUX shell scripts and execute various shell programs.
Specific Core & Practical PHP & Mysql	Write PHP code to produce outcomes and solve problems. Display and insert data using PHP and MySQL. Test, debug, and deploy web pages containing PHP and MySQL.
Core & Practical Ethical Hacking	Identify and analyze the stages an ethical hacker requires to take in order to compromise a target system. Identify tools and techniques to carry out a penetration testing. Critically evaluate security techniques used to protect system and user data. Demonstrate systematic understanding of the concepts of security at the level of policy and strategy in a computer system. Plan a vulnerability assessment and penetration test for a network. Execute a penetration test using standard hacking tools in an ethical manner. Report on the strengths and vulnerabilities of the tested network.
Core & Practical Digital Forensics	Define the concept of ethical hacking and its associated applications in Information Communication Technology (ICT) world.. Explain the methodology of incident response and various security issues in ICT world, and identify digital forensic tools for data collection. Recognize the importance of digital forensic duplication and various tools for analysis to achieve adequate perspectives of digital forensic investigation in various applications /devices like Windows/Unix system. Apply the knowledge of IDS to secure network and performing router and network analysis. List the method to generate

	legal evidence and supporting investigation reports and will also be able to use various digital forensic tools.
Core & Practical R Programming	The R Statistical Programming Language. The R Studio Integrated Development Environment (IDE). Data importation methods. Basic R Data Types. Data processing and manipulation techniques. External add-in packages for R. Summary statistic functions. Data visualisations using ggplot. Error types

Allied

PC and Mobile Hardware Trouble Shooting	Understand the basics of Computer Maintenance and understands the Mobile servicing. Exercise Mobile Phone Repair and Maintenance, Diagnosing and repairing mobile phone faults. To learn about basic knowledge about Laptop device and components. Understand basic troubleshooting in mobile and Ethics and Legal Aspects of Working. Understand basic troubleshooting in mobile and Ethics and Legal Aspects of Working

Elective

Data Mining	This course gives an introduction to methods and theory for development of data warehouses and data analysis using data mining. Data quality and methods and techniques for preprocessing of data. Modeling and design of data warehouses. Algorithms for classification, clustering and association rule analysis. Practical use of software for data analysis.
Software Testing	Understand fundamentals of Software testing - Why, Where, at what level by whom etc. & Motivation behind study with examples. Changing mindset (Testing is no more second priority) Understand importance of Testing. Software testing requirements. Get an overview of SW testing types, Teschniques, skills required, tools needed