PROGRAMME OUTCOMES AND COURSE OUTCOMES

2023 – 2024

Name of the Programme: B.Sc.INFORMATION TECHNOLOGY **Programme Code: USIT**

Programme Outcomes:

PO 1	Apply acquired scientific knowledge to solve complex issues.
PO 2	Attain Analytical skills to solve complex cultural, societal and environmental issues.
PO 3	Employ latest and updated tools and technologies to analyse complex issues.
PO 4	Demonstrate Professional Ethics that foster Community, Nation and Environment Building Initiatives.

Course Outcomes:

Course Code	Course Title	Course Outcomes
23I1CC1	Programming In C	CO1: Outline the fundamental concepts of C programming languages, and its features

		CO2: Demonstrate the programming methodology. CO3: Identify suitable programming constructs for problem solving. CO4: Select the appropriate data representation, control structures, functions and concepts based on the problem requirement. CO5: Evaluate the program performance by fixing the errors.
23I1CC2	C Programming Practical	CO1: Demonstrate the understanding of syntax and semantics of C programs. CO2: Identify the problem and solve using C programming techniques. CO3: Identify suitable programming constructs for problem solving. CO4: Analyze various concepts of C language to solve the problem in an efficient way. CO5: Develop a C program for a given problem and test for its correctness.
23I1FC	Fundamentals Of Computer	CO1: Outline the Computer fundamentals and various problem solving concepts in Computers CO2: Describe the basic computer organization, software, computer languages, software development life cycle and the need of structured programming in solving a computer problem

		CO3:Identify the types of computer languages, software, computer problems and examine how to set up expressions and equations to solve the problem. CO4:Choose most appropriate programming languages, constructs and features to solve the problems in diversified domains. CO5:Analyze the design of modules and functions in structuring the solution and various Organizing tools in problem solving.
23I1SE1	Office Automation	CO 1: Use Word to prepare organizational documents. CO 2:Design financial & other business applications requiring mathematical calculations using spread sheet software. CO 3: Develop various charts--pie, bar, line, column, & area using spread sheet software. CO 4:Create Dynamic presentations with animation. CO 5:Demonstrate presentations with narration and images.
23I2CC3	Java Programming	CO1:Outline the basic terminologies of OOP, programming language techniques, JDBC and Internet programming concepts CO2:Solve problems using basic constructs, mechanisms, techniques and technologies of Java

		CO3: Analyse and explain the behaviour of simple programs involving different techniques such as Inheritance, Packages, Interfaces, Exception Handling and Thread and technologies such as JDBC and Servlets CO4:Assess various problem-solving strategies involved in Java to develop a high-level application. CO5: Design GUI based JDBC applications and able to develop Servlets using suitable OOP concepts and techniques
23I2CC4	Java Programming & Data Structures Practical	CO1:Identify and explain the way of solving the simple problems CO2:Use appropriate software development environment to write, compile and execute object-oriented Java programs CO3:Analyze and identify necessary mechanisms of Java needed to solve real-world problem CO4:Test for defects and validate a Java program with different inputs CO5:Design, develop and compile Core Java , GUI , JDBC and servlet applications that utilize OOP and data structure concepts
23I2SE2	Multimedia Lab	CO 1: Utilize the various options in Photoshop working area. CO 2: Apply basic tools to format the images and its background.

		CO3: Make use of selection andpainting tools for editing images. CO 4: Develop effective graphics for both web and print media. CO 5: Apply layer features and layer management techniques for creating Web pages and Invitations.
23I2SE3	Automation Skills	CO 1: Use Word to prepare organizational documents. CO 2: Design financial & other business applications requiring mathematical calculations using spread sheet software. CO 3: Develop various charts--pie, bar, line, column, & area using spread sheet software. CO 4: Create Dynamic presentations with animation. CO 5: Demonstrate presentations with narration and images.
19I3CC5	Database Management Systems	CO1: Explain the structure and model of the relational database system. CO2: Design multiple tables and use group functions, sub queries. CO3: Design a database based on a data model considering the normalization to a specified level. CO4: Develop E- R model-based tables. CO5: Evaluate different PL/SQL blocks.

19I3CC6	Lab Iii Rdbms	CO1: Explain Various SQL Commands. CO2: Write SQL queries to user specifications CO3: Design database schema considering normalization and relationships within database. CO4: Develop PL/SQL Programs. CO5: Develop triggers, procedures and Cursors.
21P3ACI3	Digital Principles And Computer Architecture	CO1: Explain about digital logic circuits CO2: Compute simple arithmetic operations for fixed-point and floating-point addition and subtraction. CO3: Understand various digital components. CO4: Construct an instruction set capable of performing a specified set of operations. CO5: Demonstrate a memory system for a given set of specifications.
22I3SB1	Skill Based– Excel Using VBA	CO 1: Understand fundamentals of VBA CO 2: Apply different conditional logics and loops CO 3: Build forms with interactivity CO 4: Apply Events and Setting in Excel sheets. CO 5: Develop Procedures and Array concepts.

22I4CC7	Programming In Java	CO1: Understand the concepts of Object-Oriented Programming & Java Programming Constructs. CO2: Understand basic concepts of Java such as operators, classes, objects, inheritance, packages, Enumeration and various keywords. CO3: Understand the concept of exception handling and Input/output operations. CO4: Design Java & Java applet-based applications. CO5: Analyse & Design the concept of Event Handling and Abstract Window Toolkit.
22I4CC8	Lab Iv – Programming In Java	CO1: Implement Object Oriented programming concept using operators and control Structures. CO2: Design java programs using inheritance, interfaces and packages. CO3: Implement exception handling mechanism and multithreading concept. CO4: Design Java applet-based applications. CO5: Design applications to Handle Events using AWT components.
19I4SB2	Analytical Skills	CO1: Understand the short cut methods.

		CO2: Apply general mathematical techniques. CO3: Develop their critical thinking. CO4: Recall the formulas. CO5: Solve the sums by applying shortcut methods with time management.
23I5CC9	.Net Programming	CO1: Explain the .NET framework. CO2: Apply C# concepts in developing software solutions based on user requirements. CO3: Design basic GUI applications using .NET. CO4: Demonstrate advanced features of ASP.NET programming. CO5: Develop windows application and web applications in .NET framework analyzing user requirements.
23I5CC10	Lab V: .Net Programming	CO1: Understand various application types. CO2: Create dynamic window application. CO3: Use asp.net controls in web application. CO4: Build interactive Web pages. CO5: Use XML in web application.
19I5CC11	Software Engineering	CO1: Understand how to plan a software project.

		CO2: Analyse the cost estimate and problem complexity using various estimation techniques. CO3: Prepare the SRS, Design document, Project plan of a given software system. CO4: Apply Software design and implementation ideas in S/W project development. CO5: Generate test cases using White Box testing and Black Box testing.
19I5CC12	Operating Systems	CO1: Describe the evolution, types, structure and functions of operating systems. CO2: Explain techniques involved in concurrency and deadlock. CO3: Describe memory management and processor scheduling used in operating systems. CO4: Implement disk scheduling algorithm for a given scenario. CO5: Execute Linux basic commands and shell scripts.
19I5ME1	Data Mining	CO1: Identify data mining tools and techniques in building intelligent machines. CO2: Understand different pre-processing techniques. CO3: Analyse various data mining algorithms while applying in real time

		applications. CO4: Compare various supervised and unsupervised learning techniques in data mining. CO5: Illustrate the mining techniques like association, classification and clustering.
19I5ME2	Network Security	CO1: Understand the basic concepts of security. CO2: Analyze various cryptographic algorithms while applying practically. CO3: Identify Asymmetric based cryptographic algorithms. CO4: Compare different internet security protocols. CO5: Summarize the concepts of firewall and IP security.
23I5SB3	Skill Based – Basics Of HTML5	CO 1: Identify how to create a webpage with basic designing concepts. CO 2: Apply basic tags for table creation and alignments in a static webpage. CO 3: Design and edit images in the web pages. CO 4: Apply various tags for the creation of dynamic webpage. CO 5: Develop effective graphics for web.
23I5SB4	Skill Based – Web Programming Using	CO 1: Describe fundamentals of webin PHP scripts to handle HTML

	PHP	forms. CO 2: Describe the importance regular expressions including modifiers, operators, and metacharacters CO 3: Create PHP programs that use various PHP library functions, and that manipulate files and directories CO 4: Analyze and solve various database tasks using the PHP language. CO 5: Analyze and solve common Web application tasks by writing PHP programs.
23I6CC13	Python Programming	CO1: Identify the basic concepts of python program. CO2: Apply the Input and output statements in python. CO3: Analyze the usage of function control structure. CO4: Describe String, List and Tuples. CO5: Create Python Dictionary and Files.
23I6CC14	Lab Vi : Python Programming	CO1: Demonstrate the basic concepts of variables expressions. CO2: Develop basic python programs with I/O operations. CO3: Develop programs with function control structure. CO4: Apply strings and lists in python. CO5: Develop python programs with files.

19I5CC12	Data Communication And Networking	CO1: Describe the components of a data communications system CO2: Identify key considerations in selecting various switching techniques and various transmission media in networks CO3: Describe the various types of Protocols in Network layer and their features CO4: Illustrates the functionality of transport layer and their corresponding protocols. CO5: Analyse different usage of application layer protocols.
22I6ME3	Cloud Technology	CO1: Understand fundamental concepts of cloud service and deployment models. CO2: Identify the importance of virtualization along with their technologies. CO3: Analyse different cloud computing Services. CO4: Analyse the components and the security in cloud. CO5: Illustrate different design & develop backup strategies for cloud data based on features.
21I6ME4	Mobile Communication	CO1: Understand the infrastructure to develop mobile communication systems.

		CO2: Identify the characteristics of different multiple access techniques in mobile communication. CO3: Analyse the measures GSM systems and the entire protocol architecture of GSM. CO4: Understand the GPRS technologies and architecture for communication using Mobile Devices. CO5: Illustrate the Security issues in Mobile Computing.
19I6ME5	Information Storage And Management	CO1: Know the concepts of Storage and Data structure Environment based on growth and challenges in IT. CO2: Understand data protection by using related and recent techniques. CO3: Identify the parameters of managing and monitoring the storage infrastructure and manage the solutions. CO4: Know backup and archival data in both classic and virtualized environment. CO5: Analyse, Monitoring and managing the storage infrastructure in cloud environments.
19I6ME6	Computer Graphics	CO1: Understand the need and concepts of computer graphics.

		CO2: Describe the procedure for points, lines and Circle. CO3: Analyse various attributes of output primitives. CO4: Illustrate two-dimensional geometric transformation. CO5: Analyse windowing and clipping concepts.
23I6SB5	Advanced Html5	CO 1: Understand advanced techniques in CSS3. CO 2: Identify to adding videos and graphics with html5. CO 3: Identify building web page layouts with CSS& HTML5 APIs. CO 4: Developing forms with advanced GUI interface. CO 5: Validating Forms in the web.
23I6SB6	Fundamentals Of Android Programming	CO1: Able to Install Java Development Toolkit. CO2: Install and configure Android application development tools CO3: Design and develop user Interfaces for the Android platform. CO4: Identify the Application & Layouts Concepts. CO5: Save state information across important operating system events.