PROGRAMME OUTCOMES AND COURSE OUTCOMES

2023 – 2024

NAME OF THE PROGRAMME: M.Sc Information Technology **Programme Code: PSIT**

Programme Outcomes:

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

Course Outcomes:

Course Code	Course Title	Course Outcomes
23PG1I1	Python Programming	CO 1: Explain the basic concepts in python language. CO 2: Apply the various data types and identify the usage of control statements, loops, functions and modules in python for processing the data CO 3: Analyze and solve problems using basic constructs and techniques of python. CO 4: Assess the approaches used in the development of interactive application. CO 5: To build real time programs using python
23PG1I2	Python Programming Practical	CO 1: Understand the significance of control statements, loops and functions in creating simple programs. CO 2: Apply the core data structures available in python to store, process and sort the data CO 3: Analyze the real time problem using suitable python concepts CO 4: Assess the complex problems using appropriate concepts in python

		CO 5: Develop the real time applications using python programming language.
23PG1I3	Web Development Using Wordpress	CO 1: Identify the tools which will be suitable for the requirement of the webpage. CO 2: Implement Java script and Style Sheets effectively in the Web Pages CO 3: Analyze the different tools and built-in functions available to be applied inthe webpage CO 4: Rate the design and effectiveness of the Web Pages created. CO 5: Design and publish a website using Wordpress
23PG1IAE	Image Editing And Animation	CO 1: Design and edit images using image-editing tool. CO 2: Apply layer features for creating images for web and print. CO 3: Build program in Alice using looping and branching. CO 4: Apply event handlers in alice. CO 5: Develop 3D animations.
23PG1IE1	Data Structures	CO1: To understand the concept of Object Oriented Programming & Java Programming Constructs.

		CO2: To practice the concepts of operators, classes, objects, inheritance, packages, Enumeration and various keywords. CO3: To apply exception handling mechanisms. CO4: To design the applications of Java & Java applet, Swings and JDBC. CO5: To Analyze and implement J2ME
23PG1IE2	Natural Language Processing	CO1:Implement Basic Data Access, List CO2: Develop programs using Array, function. CO3: Use Linear Regression and ANOVA CO4: Understand Graphical Configurations. CO5: Develop program using simulation and statistical method.
23PG1IE3	Operating Systems	CO 1: Outline the fundamental concepts of an OS and their respective functionality CO 2:Demonstrate the importance of open-source operating system commands CO 3: Identify and stimulate management activities of operating system CO 4: Analyze the various services provided by the operating system

		CO 5: Interpret different problems related to process, scheduling, deadlock, memory and files
23PG1IE4	Human Computer Interaction	CO 1: Describe typical human–computer interaction (HCI) models, styles, and various historic HCI paradigms CO 2: Identify the usability and the beneficiary factors of User support systems CO 3: Analyze the core theories, models and methodologies in the field of HCI CO 4: Evaluate interactive systems based on the human factor theories CO 5: Elaborate an interactive system based on the design principles, standards and guidelines
23PG2I4	Database Systems	CO 1: Explain the relational databases and uses of PL/SQL CO 2: Apply Schema, ER-Model, normalization, transaction, concurrency, and recovery on tables using SQL and PL/SQL. CO 3: Analyze and manage relational & distributed, database, transaction, Concurrency control and query languages CO 4: Assess databases based on models and Normal Forms.

		CO 5: Design and construct tables and manipulate it effectively using PL/SQL database objects
23PG2I5	Rdbms Lab	CO 1: Understand the significance of control statements, loops and functions in creating simple programs. CO 2: Apply the core data structures available in SQL to store, process and sort the data CO 3: Analyze the real time problem using suitable SQL concepts CO 4: Assess the complex problems using appropriate concepts in SQL CO 5: Develop the real time applications using programming language.
23PG2I6	Open Source Technologies Practical	CO 1: Demonstrate the setup and configuration of development environment to write PHP and Ruby Scripts CO 2: Select the appropriate language fundamentals and techniques to write and compile PHP and Ruby programs CO 3: Examine the bugs and analyze how to prevent and remove the bugs CO 4: Test and debug the application with sample inputs to check the correctness and consistency of the scripts

		CO 5: Create simple programs that make use of various PHP and Ruby features andFunctions and solve web application and database tasks using PHP
23PG2IAE	E-Commerce And Content Management Systems	CO 1: Describe fundamentals of web. Introduce the creation of static webpage using HTML. CO 2: Describe the importance of CSS in web development CO 3: Describe the function of JavaScript as a dynamic webpage creating tool CO 4: Distinguish PHP as a server side programming language CO 5: Outline the principles behind using MySQL as a backend DBMS with PHP
23PG2IE5	Networks And Security	CO 1: Outline the basic data structures CO 2: Identify the different operations and memory representations CO 3: Interpret different techniques with their complexities CO 4: Compare the applications of various data structures CO 5: Choose an algorithm to solve simple problems suited for appropriate situations
23PG2IE6	Biometric Techniques	CO 1: Outline the existing theories, methods and interpretations in

		the field ofbiometrics CO 2: Identify the deployment areas, competing technologies, strength and weakness of various Physiological and Behavioral Biometrics CO 3: Analyze various Application areas, Biometric security issues and Biometricstandards CO 4: Assess the methods relevant for design, development and operation of biometric access control systems CO 5: Determine identification /verification systems to validate the user identity and technological uplifts in biometrics compared to traditional securing mechanisms
23PG2IE7	Object Oriented Analysis And Design	CO1: Recognize the concepts and principles of object-oriented analysis, design and Testing CO2: Demonstrate the importance of system development process using various approaches and choose the relevant technique for a system in each phases of SDLC CO3: Differentiate various object-oriented analysis, design and testing methods and models. CO4:Assess various analysis, design and testing strategies

		appropriate to build high- performance object-oriented system CO5: Design Object oriented systems using object modelling techniques and analyze them for correctness and quality
23PG2IE8	Software Project Management	CO1:Understanding of project management fundamentals such as project planning, risk management and quality assurance CO2:Choose the appropriate scheduling and testing techniques to build a quality product CO3:Apply different cost estimation techniques and quality measures for software development CO4:Differentiate various software development models and methodologies, planning activities and scheduling methods CO5:Asses the importance of software project documentation and identify the methods to create project documentation, including requirements documents, design documents, and project plans
21PG3IT12	Data Mining And Data Warehousing	CO1: Understand the fundamental concept of Data Mining and analyze and evaluate the data cleaning, integration , transformation and reduction techniques. CO2: Design multidimensional data using Data Warehouse

		architecture. CO3: Analyze and evaluate Classification algorithms. CO4: Identify the types of data in Cluster Analysis and categorize the Cluster Methods. CO5: Utilize the Data Mining techniques in various real applications and in major issues.
21PG3IT13	Advanced Python Programming	CO1:Understand the basic programming style in python . CO2: Apply various types of control flow statements in python programs. CO3: Identify the structure and components of a python program. CO4: Analyze Object oriented programming concepts and techniques in python. CO5: Implementing the GUI concepts in Python.
21PG3IT14	Lab V: Data Mining And Data Warehousing	CO1: Utilize Weka tool to evaluate Data Mining algorithms. CO2: Demonstrate pre processing steps involved in different datasets. CO3: Develop the decision tree algorithm using different datasets. CO4: Demonstrate the classification and clusters algorithms using large datasets.

		CO5: Analyze Data Mining techniques for realistic data.
21PG3IT15	Lab Vi: Advanced 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.
21PG3ITE4	Software Testing	CO1: Discuss various software application domains and different process model used in software development. CO2: Demonstrate the basics of software quality assurance and defect prevention. CO3: Compare different testing strategies and tactics. CO4: Apply the software testing techniques in commercial environment. CO5: Explain high performance testing using Jmeter.
22PG3ITE5	System Software & Compiler Design	CO1: Interpret the concepts of system software and machine architecture. CO2: Identify the concepts of loader and linkers CO3: Analyse the concepts of working principles of compilers.

		CO4: Experiment Finite Automata for regular expressions. CO5: Simplify the expressions using Parser.
21PG3ITE6	Computer Forensics	CO1:Understand basic concepts in Computer forensics. CO2:Explain different investigation procedures. CO3: Understand different Data acquisition mode. CO4: Understand investigation process using computer forensics. CO5: Know how to apply forensic analysis tools to recover important evidence for identifying computer crime
21PG3ITE7	Big Data Analytics	CO1: Understand the Characteristics and challenges of Big Data. CO2: Describe the concepts of Big Data Analytics. CO3: Utilize Hadoop for Big Data Technologies. CO4: Demonstrate MAPREDUCE Programming. CO5: Describe types of Recommendation Systems using Big Data Analytics.
21PG3ITE8	Internet Of Things	CO1: Understand the basic concepts of IoT. CO2: Discuss physical and logical design of IoT enabled technologies. CO3: Analyze how and where IoT can be applied. CO4: Compare M2M and IoT.

		CO5: Analyse the features of Python used for IoT implementation.
22PG3ITE9	Algorithm Design And Analysis	CO1: To understand the basic concepts of analysis. CO2: Analyze the concept of various searching and traversal techniques. CO3: Discuss concept of dynamic programming and greedy method. CO4: Explain the concepts of Backtracking, branch and bound methods CO5: Apply the algorithm for NP-Hard and NP- complete problems.
19PG3ITSI	Summer Internship	CO1: Identify employment contacts leading directly to a full-time job following course completion. CO2: Create communication, interpersonal and other soft skills essential for the job interview process. CO3: Analyze the project requirements and engages in continuing professional development. CO4: Analyze a problem and identify the computing requirements appropriate to its solution. CO5: Utilizing a new software tool.

19PG4ITPR	Project Work And Viva Voce	CO1: Discuss project development and the associated business processes. CO2: Plan as an individual or in a team in development of technical projects. CO3: Communicate with engineers and the community at large in written and oral forms. CO4: Create effective communication skills for presentation. CO5: Analyse problems and formulate solutions.
21PG4IT16	Biometrics	CO1: To understand the basic concepts in R- Programming. CO2: Illustrate various statements used in R-Programming. CO3: Analyze various techniques to import and export the data set. CO4: To know about the aggregate functions. CO5: Implementation of R-Programming in current scenario