M.SC INFORMATION TECHNOLOGY - COURSE OUTCOME (CO)

Core– I – Advanced Java Programming	CO1	To understand and explore the basics of JDK Environment & tools also with OOPs
	CO2	Understand the basics of java, control structure and Array concepts in java.
	CO3	To learn the functions of Classes and Objects.
	CO4	To familiarize the Packages also collections
	CO5	Understanding the File and Exception Handling methods in java environment.
Core– II – Software Engineering	CO1	To provide an insight into the processes of software development
	CO2	Understand and practice the various fields such as analysis, design, development, testing of Software Engineering.
	CO3	Develop skills to construct software of high quality with high reliability
	CO4	To apply metrics and testing techniques to evaluate the software
	CO5	Test Strategies for WebApp
Shell Programming	CO1	Understanding the basic set of commands and utilities in Linux/UNIX systems.
	CO2	To learn to develop software for Linux/UNIX systems.
	CO3	To learn the important Linux/UNIX library functions and system calls
	CO4	To obtain a foundation for an advanced course in operating systems
	CO5	To understand the concept of web processing and file systems in

		linux.
Core Practical – I – Java Programming Lab	CO1	Implement and know the concept of Java Data Base Connectivity.
	CO2	Development of web based components using Servlets.
	CO3	Java application development using Java Beans.
	CO4	Using JSP to dynamically generate HTML, XML or other types of documents in response to a Web client request.
	CO5	The server and the client communicate and pass information back and forth by using RMI.
Practical – II– Shell Programming Lab	CO1	Comfortably use basic UNIX/Linux commands from the command line
	CO2	Organize and manage their files within the UNIX/Linux file system. And organize and manage their processes within UNIX/Linux
	CO3	Usefully combine UNIX/Linux tools using features such as filters, pipes, redirection, and regular expressions.
	CO4	Customize their UNIX/Linux working environment
	CO5	Know how to use UNIX/Linux resources to find additional information about UNIX/Linux commands
Core-IV Internet of Things	CO1	Students can understand and develop their knowledge of Internet of Things
	CO2	Analyze basic protocols in wireless sensor network
	CO3	Students can develop their knowledge of applications related with IOT.
	CO4	Design IoT applications in different domain and be able to analyze their performance
	CO5	Implement basic IoT applications on embedded platform.

Core– V – Advanced Database	CO1	To understand the terminology, features, classifications, and characteristics embodied in database systems.
	CO2	To understand and apply the Relational Data Model and Relational model concepts.
	CO3	To gain knowledge in data models and schemas in DBMS. To understand the features of database management systems and Relational database.
	CO4	To gain basic Concepts and appreciate the applications Of database systems.
	CO5	To use the Relational model and how it is supported by SQL and PL/SQL.
Core– VI – Data Mining and Warehousing	CO1	To introduce the concepts of data Mining and its applications
	CO2	To understand the concept of Data Preprocessing and its methods.
	CO3	To introduce the concepts of Classification Models
	CO4	To introduce advanced Data Mining techniques
	CO5	To introduce Association Rules Mining
Core– VII – Web Technology	CO1	To identify the audience, purpose, uses, and structure of your web site and brief introduction about HTML, CSS and javascript.
	CO2	To learn the elements of HTML, using it to add content to your original design in the form of web pages.
	CO3	To Design and develop basic web pages using HTML and CSS. Design and develop web pages using CSS styles, internal and/or external style sheets.
	CO4	To Find appropriate snippets of JavaScript code and to adapt them to work with your site as well as learn to read and critique

		JavaScript code.
	CO5	To become proficient in the use of JavaScript commands, objects, functions, and tools. Topics addressed.
Core Practical – III – Advanced Database Lab	CO1	To understand database systems from file systems by enumerating the features provided by database systems and describe each in both function and benefit.
	CO2	To analyze an information storage problem and derive an information model expressed in the form of an entity relation diagram and other optional analysis forms, such as a data dictionary
	CO3	To understand the features of database management systems and Relational database
	CO4	To understand the functional dependencies and design of the database and to understand the concept of Transaction and Query processing
	CO5	To understand terminology, features, classifications, and characteristics embodied in database systems.
Core Practical – IV – Web Technology Lab	CO1	Conceptualize and plan an internet-based business that applies appropriate business models and web technologies.
	CO2	To Select and apply markup languages for processing, identifying, and presenting of information in web pages.
	CO3	Design websites using appropriate security principles, focusing specifically on the vulnerabilities inherent in common web implementations.
	CO4	Incorporate best practices in navigation, usability and written content to design websites that give users easy access to the information.

	CO5	To Create a static website using HTML and add dynamic functionality to it by using java Script.
Core– VIII – Python Programming	CO1	To understand the history and development of Python Programming Language
	CO2	To understand the data structures and looping concepts in Python Programming Language.
	CO3	To understand the important packages and functions in Python Programming Language
	CO4	To understand the importance of Python Programming Language in data wrangling or munging
	CO5	To understand the impact of Python Programming Language in statistical analysis
Elective-I Principles of Multimedia	CO1	To understand the basic concept about multimedia
	CO2	To understand basic tools in multimedia
	CO3	Basic details about colour models in image
	CO4	To understand basic video and audio signals
	CO5	To understand audio and video compression techniques in multimedia
Elective-I Software Reliability	CO1	Attain the basic techniques of quality improvement, fundamental knowledge of statistics and probability
	CO2	Use control charts to analyze for improving the process quality
	CO3	Describe different sampling plans
	CO4	Acquire basic knowledge of total quality management
	CO5	Understand the concepts of reliability and maintainability
Elective-I	CO1	To understand the basic sensor network technology

Wireless Sensor Network	CO2	To understand the wireless transmission technology
	CO3	To understand Mac protocols for wireless sensor networks
	CO4	To understand routing protocols for wireless sensor networks
	CO5	To understand the basic concept of middleware technologies.
Elective-II Multimedia - 3D Software	CO1	To understand the basic concept about multimedia
	CO2	To understand basic tools in multimedia
	CO3	Basic details about colour models in image
	CO4	To understand basic video and audio signals
	CO5	To understand audio and video compression techniques in multimedia
Elective-II Software Quality Assurance	CO1	Understand the basic concepts of software quality Assurance. The ability to understand the software requirements.
	CO2	Know the theoretical concept of software quality factors. The ability to know the software life cycle
	CO3	Understand the planning stages of software quality assurance. To know about the reviews of software quality assurance.
	CO4	Know the software development methodologies. The ability to know the verification and validation process.
	CO5	The ability to understand the testing concepts. To understand the cost of the projects.
Elective-II Information Hiding Techniques	CO1	Understand the subtle differences between the principles of abstraction, information hiding and encapsulation.
	CO2	Understand how these principles are expressed with traditional programming techniques such as: subprograms, data types, records, modules and abstract data types
	CO3	Be able to use the principle of abstraction to manage the

		complexity in a large software system
	CO4	Be able to use the principle of information hiding to find a high-quality modularization
	CO5	Understand how programming to abstractions can improves the quality of software
Core Practical – VI – Industrial Training Report	CO1	To enable students gain an exposure to industry.
	CO2	To gain and understand the company's history, details of its founders or shareholders, the nature of business, organizational structure, reporting relationships.
	CO3	To indentify the real-time problem in the project.
	CO4	To gain working experience in the industry.
	CO5	To adopt the industry state of affairs.
Core– IX – Data Science	CO1	Students will develop relevant programming abilities.
	CO2	Students will demonstrate proficiency with statistical analysis of data.
	CO3	Students will develop the ability to build and assess data-based **models.**
	CO4	Students will execute statistical analyses with professional. statistical **software**.
	CO5	students will demonstrate skill in data management.
Elective- III- Adobe illustrator & After Effects	CO1	Identify elements of the Illustrator user interface and demonstrate knowledge of their functions.
	CO2	Demonstrate knowledge of how to work with brushes, symbols, graphic styles, and patterns.
	CO3	The usage of Color Tools and Shape tools
	CO4	Demonstrate knowledge of how to use drawing and shape tools

	CO5	Demonstrate knowledge of how to create the special effects.
Elective- III- Software testing	CO1	Upon completion of this course, The student should understand the software test life cycle.
	CO2	The relationship between testing, software quality and other verification techniques and theoretical limits of software testing
	CO3	The concepts and techniques for black-box and white-box testing**.** The SPRAE (specification-premeditation-repeatability-accountability-economy) framework for testing practice.
	CO4	Design patterns for test automation**.** The challenges of object-oriented testing
	CO5	Test coverage measures such as statement, branch, and path coverage management procedures for software testing.
Elective- III- Cryptography	CO1	Enable the students to learn fundamental concepts of computer security and cryptography and utilize these techniques in computing systems.
	CO2	They will be able to combine these basics with their knowledge of experimental methodologies to identify, formulate, and solve engineering problems.
	CO3	Function effectively in their discipline of practice, and will continue their education through graduate/professional studies and/or participation in professional seminars and societies.
	CO4	Utilize their training and experience in creative and design processes toward their job functions.
	CO5	A working knowledge of fundamentals. Graduates will have knowledge of math and science fundamentals.
Elective- IV- Ajax	CO1	.Design and implement Object classes using class diagrams,

Programming		constructors, encapsulation, inheritance, and polymorphism.
	CO2	Write applications that manipulate the Document Object Model to fetch and display information using jQuery
	CO3	Create anonymous functions and closures, and use them to store and access local data.
	CO4	Apply the jQuery AJAX interfaces and JSON to upload data to a back-end web server, and to asynchronously retrieve and display responses
	CO5	Test and debug JavaScript web applications.
Elective- IV- Agile testing	CO1	The background to testing in an Agile project and the roles and responsibilities of a typical Agile testing team.
	CO2	The definition of quality in an Agile project and Adapt existing testing experience and knowledge to Agile values and principles.
	CO3	Apply relevant methods and techniques for testing in an Agile project and test automation activities.
	CO4	Assist business stakeholders in defining understandable and testable user stories, scenarios, requirements and acceptance criteria as appropriate.
	CO5	Work and share information with other team members using effective communication styles and channels, The various tools available to Agile test teams to facilitate the testing of the project.
Elective- IV- Mobile Communications	CO1	Understanding the basic principles of mobile communication systems.
	CO2	An analysis of mobile communications with the interpretation of the call prints.
	CO3	The basic principles of the modern mobile and wireless communication systems.

	CO4	Understanding the radio interference and mobile communications systems.
	CO5	Understanding the operation of mobile communications systems and their generation divisions.