FATIMA COLLEGE

(Autonomous)
Affiliated to Madurai Kamaraj University
Re-Accredited with 'A++' (CGPA 3.61) by NAAC (Cycle - IV)
Mary Land, Madurai - 625018, Tamil Nadu

PROGRAMME OUTCOMES AND COURSE OUTCOMES

2021 – 2022

NAME OF THE PROGRAMME:M.Sc Information Technology   PROGRAMME CODE: PSIT

Programme Outcomes (POs)

PO 1	Computational Knowledge: acquire knowledge of Computing Fundamentals, Computing Specialization, and Domain Knowledge of proper computing models from defined problems
PO 2	Problem Analysis: identify, invent, research activities to fundamental concepts of Mathematics, Computing Science and Relevant Domains provide solutions for complex computing problems using
PO 3	Design and Development: design and develop a solution for complex problems in domains like Banking, Insurance, Healthcare Systems and Multimedia and Mass Communications.

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PO 4	Research Activity: apply Research based knowledge and methodologies to design, analyze and interpretation of data and find the solutions for complex problems by applying right tools
PO5	Professional ethics: understand professional ethics and Cyber regulations and develop the youth with social commitments.
PO 6	Creativity and Entrepreneurship: find out right opportunity for entrepreneurship and create and add value for the betterment of an individual and society at large.

Course Outcomes (COs)

Course Code	Course Title	Course Outcomes
21PG1IT1	Java & J2ME	CO1: To understand the structure and model of the Java programming language. CO2: To explain the concepts of Packages, Interfaces and strings.

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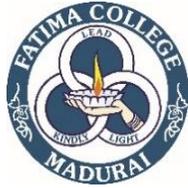|			
		CO3: To develop software implementing Exception handling mechanisms.	
		CO4: To design software for database connectivity and able to design GUI applications.	
		CO5: To implement server side programming using SERVLETS.	
21PG1IT2	Soft Computing	CO1: Understand basic model in soft computing.	
		CO2: Elaborate artificial neural network concepts.	
		CO3: Be familiar with design of various neural networks.	
		CO4: Understand genetic programming.	
		CO5: Exposed to various hybrid systems.	
21PG1IT3	Data Management using R Programming	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.	

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21PG1IT4	Distributed Operating Systems	CO1: Understand the core concepts of distributed systems. CO2: Analyze various message passing mechanisms with its model. CO3: Identify the inherent difficulties that arise due to distribution of computing resources. CO4: Explain migration with the process management policies. CO5: Explain the basic concepts, design and structure of the LINUX operating system.
21PG1IT5	LAB I: Java & J2ME	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

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		JDBC.
		CO5: To Analyze and implement J2ME
21PG1IT6	LAB II : Data Management using R-Programming	CO1:Implement Basic DDL, DML and DCL commands. CO2: Develop sub queries and understand their purpose. CO3: Use Aggregate and group functions to summarize data. CO4: Understand the PL/SQL architecture and write PL/SQL code for procedures. CO5: Develop PL/SQL program using triggers, cursors, exception handling etc.
21IT1EDC	Animation Software	CO1: Understand basic concepts in Alice. CO2: Construct a scene. CO3: Build program in Alice using looping and branching. CO4: Apply event handlers in alice. CO5: Develop 3D animations

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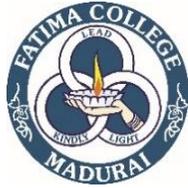|		
21PG2IT7	Data Science	CO1: Understand the fundamental concepts of data science. CO2: Evaluate the data analysis techniques for applications handling large data. CO3: Demonstrate the various machine learning algorithms used in data science process. CO4: Understand the ethical practices of data science. CO5: Learn to think through the ethics surrounding privacy, data sharing and algorithmic decision-making.
21PG2IT8	Digital Image Processing	CO1: Understand the representation of digital image and its manipulations. CO2: Analyze image sampling and quantization requirements and implications. CO3: Describe various Transformation and Filtering Techniques. CO4: Demonstrate Restoration And Reconstruction models. CO5: Utilize Image Compression And Segmentation for efficient

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		storage.
21PG2IT9	Android Programming	CO1: Design scripts to meet given interface and media control requirements. CO2: Utilize variables, properties and other code elements appropriately to implement the code design. CO3: Implement and evaluate techniques for the installation of mobile applications. CO4: Explain the principles of technologies which support media production and delivery on a variety of platforms. CO5: Evaluate alternative mobile frameworks, and contrast different programming platforms.
21PG2IT10	LAB III : Digital Image Processing	CO1: Demonstrate Fundamental Steps involved in Digital Image Processing. CO2: Analyze and use Mathematical Tools for Digital Image Processing.

		CO3: Apply Intensity Transformation functions and Spatial filtering methods.
		CO4: Utilise Color Image Processing with different Color Models.
		O5: Implement Image Segmentation Techniques and Image Compression Techniques using Huffman , Golomb and Arithmetic coding algorithms.
21PG2IT11	LAB IV: Android Programming	CO1: Develop enterprise-level mobile solutions.
		CO2:Install and configure Android application development tools.
		CO3:Demonstrate Save State information across important operating system events.
		CO4:Develop advanced application programs using Android.
		CO5: Design and develop mobile applications.
21PG2ITE1	Adhoc Network	CO1: Understand the design issues in ad hoc and sensor networks.
		CO2:Learn the different types of MAC protocols.
		CO3: Be familiar with different types of adhoc routing protocols.

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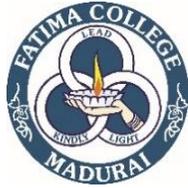|		
		CO4: Be expose to the TCP issues in adhoc networks. CO5: Learn the architecture and protocols of wireless sensor networks.
21PG2ITE2	Machine Learning	CO1: Have a good understanding of the fundamental issues and challenges of machine learning concept. CO2: Understand, Analyse and identify the strengths and weaknesses of many popular machine learning approaches. CO3: Aware about the underlying mathematical relationships across Machine Learning algorithms and the paradigms of supervised and un-supervised learning. CO4: Ability to design and implement various machine learning algorithms in a range of real-world applications. CO5: Perform evaluation of machine learning algorithms and model selection.

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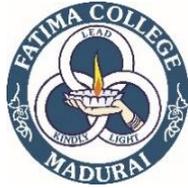|		
21PG2ITE3	Cyber Security	CO1: Analyze and evaluate the cyber security needs of an organization. CO2: Measure the performance and troubleshoot cyber security systems. CO3: Comprehend and execute risk management processes, risk treatment methods, and key risk and performance indicators. CO4: Design and develop a security architecture for an organization. CO5: Design operational and strategic cyber security strategies and policies.
21IT2EDC	Animation Software	CO1: Understand basic concepts in Alice. CO2: Construct a scene. CO3: Build program in Alice using looping and branching. CO4: Apply event handlers in alice.

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		CO5: Develop 3D animations
19PG3IT13	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.
19PG3IT14	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.

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		CO4: Analyze Object oriented programming concepts and techniques in python. CO5: Implementing the GUI concepts in Python.
19PG3IT17	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.
19PG3IT18	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.

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		CO5: Develop python programs with files.
19PG3IT15A	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.
19PG3IT15B	Digital Image Processing	CO1: Understand the representation of digital image and its manipulations.
		CO2: Analyze image sampling and quantization requirements and implications.
		CO3: Describe various Transformation and Filtering Techniques.
		CO4: Demonstrate Restoration And Reconstruction models.

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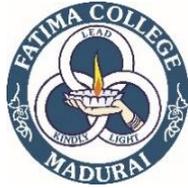|		
		CO5: Utilize Image Compression And Segmentation for efficient storage.
19PG3IT15C	Linux Shell Programming	CO1: Understand the fundamental concept of Shell Programming. CO2: Analyze the concepts of file management in Linux. CO3: To learn the linux environment, process and signal. CO4: Identify the types of POSIX threads and terminals. CO5: Utilize the facilities provided in the concept of text based screens
19PG3IT16A	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.

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19PG3IT16B	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.
19PG3IT16C	Mobile Communication	CO1: To understand the basic concepts in Mobile communication. CO2: Analyze the concept of Medium Access control. CO3: Discuss concept of Satellite system. CO4: Explain the concepts of Wireless LAN. CO5: Apply the various support required for Mobility.
19PG3ITSI	Summer Internship	CO1: Identify employment contacts leading directly to a full-time job following course completion. O2: Create communication, interpersonal and other soft skills essential for the job interview process.

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		O3: Analyze the project requirements and engages in continuing professional development.
		O4: Analyze a problem and identify the computing requirements appropriate to its solution.
		O5: 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.
19PG4IT19	R- Programming	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