FATIMA COLLEGE (AUTONOMOUS), MADURAI – 625018

NAME OF THE PROGRAMME: M. SC COMPUTER SCIENCE **PROGRAMME CODE: PSCS**

PROGRAMME OUTCOMES:

Students will be able to

PO1: Apply acquired scientific knowledge to solve major and complex issues in the society/industry.

PO2: Attain research skills to solve complex cultural, societal and environmental issues.

PO3: Employ latest and updated tools and technologies to solve complex issues.

PO4: Demonstrate Professional Ethics that foster Community, Nation and Environment Building Initiatives.

PROGRAMME SPECIFIC OUTCOMES:

PSO1: To develop professionally competent citizens by applying the scientific knowledge of Computer Science with the ability to think clearly, rationally and creatively to support in evolving solutions to the social/public/scientific issues with responsible democratic participation.

PSO2: Enterprising resourcefulness to identify, plan, formulate, design and evaluate solutions for complex computing problems that address the specific needs with appropriate consideration for Societal, Cultural, Environmental and Industrial domains.

PSO3: Holistic development to ignite the lateral thinking ability in problem solving, acquisition of new skills, open-minded and organized way of facing problems with self awareness and evolving analytical solutions

PSO4: Create and initiate innovations effectively and communicate efficiently with the computing community and society at large to bridge the gap between computing industry and academia

PSO5: Through Digital Literacy, understand, assess and commit to professional and ethical principles, norms and responsibilities of the cyber world and the ability for work efficacy as a part of a team and engage effectively with diverse stakeholders

PSO6: Ability and willingness to embark on new ventures and initiatives with critical thinking and desire for more continuous learning focusing on life skills.

PSO 7: Use research-based knowledge and research methods to design, analyse, and interpret data and to synthesize information to provide valid findings to serve community.

2019 -2020

COURSE CODE	COURSE TITLE	NATURE OF THE COURSE (LOCAL/ NATIONAL/ REGIONAL/GLOBAL)	COURSE DESCRIPTION	COURSE OUTCOMES
19PG1B1	Advanced Programming In Java	National	To understand the Networking concept using TCP/IP and RMI. To design and develop java program using Swings Components.	CO1: Describe client/server applications, TCP/IP socket programming and distributed applications using RMI. CO2: Analyze and design Window based applications using Swing Objects. CO3: Develop and design Java programs using Swing components. CO4: Discuss the various JDBC drivers and demonstrate J2EE application using JDBC

				connection and server side programs with Servlets. CO5: Write component-based Java programs using JavaBeans.
19PG1B2	Distributed Operating Systems	National	To understand the concept of design and implementation in the context of distributed operating systems.	CO1: Discuss 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.

19PG1B3	Object Oriented Software Engineering	National	To understand a systematic discipline, quantifiable approach to the design development operation and maintenance of software using object oriented concept. To understand and apply different Object Oriented development models	CO1: Differentiate traditional and object oriented software engineering CO2: Explain various SDLC methods of OOSE CO3: Describe techniques used in OOSE CO4: Explain OOSE testing methods CO5: Analyze and choose necessary method for a particular project
19PG1B4	Theory Of Computation	National	To introduce the concept of automata theory, the theory of formal languages and grammars to understand the	CO1: Demonstrate an in-depth understanding of theories, concepts and techniques in automata and their link to computation. CO2: Develop abstract machines that

			properties of physical machines	demonstrate the properties of physical machines and be able to specify the possible inputs, processes and outputs of these machines. CO3: Analyze the computational strengths and weaknesses of these machines. CO4: Explain Context-Free Grammar. CO5: Apply automata concepts and techniques in designing systems that address real world problems.
19PG1B5	Lab-I- Advanced Programming In Java	National	To implement Server Side Program with Servlets. To develop java program	CO1: Implementation of java applications that illustrate professionally acceptable coding and performance

			using JSP.	standards. CO2: Develop distributed applications using RMI. CO3: Design and develop event-driven programming and graphical user interfaces using Swing-based GUI. CO4: Design and develop Java programs using JDBC connection for data access and also Develop server side programs with Servlets. CO5: Design and develop component-based Java programs using JavaBeans.
19PG1B6	Lab-II- Operating System	National	To introduce the students to LINUX kernel programming	CO1: Utilize basic LINUX Utilities. CO2: Write different LINUX shell scripts and execute various

			To make the students aware of the features and capabilities of Linux so that they can utilize its improved functionalities	shell programs. CO3: Apply LINUX system calls. CO4: Compute various file permissions and have a basic understanding of system security. CO5: Demonstrate the basic knowledge of Linux commands and file handling utilities by using Linux shell environment.
19PGBEDC	Web Development	National	To enhance the knowledge of the students in effective webpage designing. To provide skills to sharply focus on needed information to be presented in a website.	CO1: Define various tags of HTML CO2: Design a web page with attractive display CO3: Create a Layout for a webpage using Block tags CO4: Explain how and where to apply CSS

				CO5: Design own website
19PG2B7	Extreme Programming – Asp.Net	National	To understand the Architecture of ASP.NET To acquire a working knowledge of the .NET programming model	CO1: Explain the important facts of ASP.NET 3.5, analyze and evaluate Web Form processing stages. CO2: Demonstrate web application using different types of Server Controls with input validation. Analysis and Identify state management techniques. CO3: Discuss Data Access Technology using ADO.NET architecture. CO4: Formulate Data Sources using SQL Data Source , Object Data Source and process data with rich data controls. CO5: Discuss and demonstrate

				Themes and Master pages of Web site .
19PG2B8	Mobile Application Development Using Android Studio	National	Develop a grasp of the android OS architecture. Understand the application development lifecycle.	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
19PG2B9	Design And Analysis Of Algorithms	National	Develop your ability to articulate processes for solving problems and to implement those processes efficiently within software.	CO1: Analyze the time and space complexity of given Algorithms. CO2: Demonstrate operations like searching, insertion, and deletion on various data structures. CO3: Identify appropriate sorting/searching technique for given problem. CO4: Apply the dynamic programming technique to solve the problems. CO5: Discuss advanced tree and graph applications.
19PG2B10	Lab-III - Extreme	National	To design and develop	CO1: Design and develop web

	Programming - Asp.Net		dynamic Control and validate the inputs by validation controls To design and develop different State Management Techniques	applications using different Server Controls. CO2: Implement web applications with different state managements. CO3: Create Data Access Technology using ADO.NET architecture. CO4: Design and utilize Data Sources using SQL Data Source , Object Data Source for data manipulation operation. CO5: Design and develop web sites.
19PG2B11	Lab-IV – Mobile Application Development Using Android Studio	National	Identify ,analyze and choose tools for android development including device emulator, profiling tools and IDE	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.
19PG2BE1	Computational Intelligence	National	Throws light on all categories of Evolutionary Computing To motivate to pursue research	CO1: Demonstrate the fundamental concepts of soft computing and its applications. CO2: Explain the concepts of fuzzy sets, knowledge representation using fuzzy rules, and other machine intelligence applications of fuzzy logic. CO3: Discuss the basics of an evolutionary computing CO4: Explain genetic algorithms for

				practical problems. CO5: Discuss the performance of granular computing in solving specific problems.
19PG2BE2	Neural Networks	National	To understand the fundamentals of Neural Networks To apply various models and learning algorithms for the real world scenario	CO1: Explain the basic concepts of Neural Networks. CO2: Describe the various Neural Network models. CO3: Explain Learning Rules of Neural Network CO4: Distinguish Feedback and Feed forward networks CO5: Compare Special networks and discuss the applications of Neural Network.
19PG2BE3	Software Testing	National	To give strong foundation in software	CO1: Discuss various software application domains and

			quality assurance by teaching standards, models and measurement techniques. To enhance the knowledge of the students to provide innovative solutions to various quality assurances related problems.	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: Describe the software testing techniques in different environments. CO5: Explain high performance testing using Jmeter.
19PG2BE4	Embedded Systems	National	To create interest in low level system programming To help students venture in to embedded	CO1: Explain the concepts of embedded systems CO2: Analyze the architecture of embedded systems CO3: Describe about the processors

			designing concepts	and memory organization CO4: Distinguish when and where to apply embedded concepts CO5: Describe different embedded system design technologies
19PGBEDC	Web Development	National	To enhance the knowledge of the students in effective webpage designing. To provide skills to sharply focus on needed information to be presented in a website.	CO1: Define various tags of HTML CO2: Analyze information to provide attractive display CO3: Create clear webpage for given data CO4: Explain how and where to apply CSS CO5: Design own website

COURSE CODE	COURSE TITLE	NATURE OF THE COURSE (LOCAL/NATIONAL/ REGIONAL/ GLOBAL)	COURSE DESCRIPTION	COURSE OBJECTIVES
PG3B12	Digital Image Processing	National	Design and implement algorithms for advanced image analysis Assess the performance of image processing algorithms and systems.	• Explain the representation of digital image and its manipulations • Analyze image sampling and quantization requirements and implications • Describe various Transformation and Filtering Techniques • Demonstrate Restoration And Reconstruction models • Utilize Image Compression And Segmentation for efficient storage.

PG3B13	Data Mining And Data Warehousing	National	To interpret the contribution of data mining and data warehousing to the decision support level of organizations To understand different models used for OLAP and data pre-processing	• Explain the fundamental concept of Data Mining and analyze and evaluate the data cleaning, integration , transformation and reduction techniques. • Design multidimensional data using Data Warehouse architecture. • Design and evaluate Classification algorithms. • Identify the types of data in Cluster Analysis and categorize the Cluster Methods. • Utilize the Data Mining techniques in various real applications and in major issues
PG3B14	Lab-V- Digital	National	design and implement	• Demonstrate Fundamental Steps

	Image Processing		algorithms that perform basic image processing	involved in Digital Image Processing • Analyze and use Mathematical Tools for Digital Image Processing. • Apply Intensity Transformation functions and Spatial filtering methods • Utilize Color Image Processing with different Color Models • Implement Image Segmentation Techniques and Image Compression Techniques using Huffman , Golomb and Arithmetic coding algorithms
PG3B15	Lab V1- Data Mining And Data	National	Apply the association rules for mining the	• Utilize Weka tool to evaluate Data Mining algorithms.

	Warehousing		data Design and deploy appropriate classification techniques	• Demonstrate preprocessing steps involved in different datasets. • Analyze Data Mining techniques for realistic data. • Develop the decision tree algorithm using different datasets. • Demonstrate the classification and clusters algorithms using large datasets
PG3B16	Summer Internship/ Training/ Online Certification	National	Acquire knowledge of the industry in which the internship is done. Identify areas for future knowledge and skill development.	• Identify employment contacts leading directly to a full-time job following course completion • Create communication, interpersonal and other soft skills essential for the job interview process.

				• Analyze the project requirements and engages in continuing professional development. • Analyze a problem and identify the computing requirements appropriate to its solution. • Utilizing a new software tool.
PG3BE5	Mobile Computing	National	To introduce the concept of mobile computing and provide a foundation for research.	• Determine solutions using problem solving principles, logic and systematic methodologies. • Evaluate the architecture and principles of operation of computer systems and networks. • Synthesize principles and theories of computer science and software engineering for application to different computing

				paradigms. • Design and develop software systems for various application domains. • Manage the development of software systems through a variety of development processes and methodologies.
PG3BE6	Cryptography And Network Security	National	Understand the most common type of cryptographic algorithm	• Explain the various symmetric encryption techniques and demonstrate the functionalities of DES algorithm. • Analyze public key algorithms. • Evaluate the authentication concept and hash algorithms. • Apply the concepts of key management techniques.

				• Analyze the vulnerabilities in data communication through networks.
PG3BE7	Distributed Database	National	Aware of the main techniques for managing a distributed database management system and be able to design a simple distributed database system	• Compare normal and distributed DBMS and to explain various approaches of DDBMS. • Formulate various kinds of retrieving statements to retrieve information from DDB. • Explain multiple processes dealing with distributed database system without clash • Describe the set of protocols used in DDBMS to make effective communication. • Discuss object concepts and object models.

PG3BE8	Compiler Design	National	Introduce the theory and tools that can be employed in order to perform syntax-directed translation of a high-level programming language into an executable code.	• Describe the phases of Compiler. • Explain the role and type of Parser • Analyze and use Intermediate languages • Describe the design of code generation with register utilization. • Demonstrate code optimization techniques.
PG3BE9	Cloud Computing	National	Main focus is on parallel programming techniques for cloud computing and large scale distributed systems which form the cloud infrastructure.	• Identify and use different cloud computing services. • Explain the basic principles of cloud virtualization. • Prepare the appropriate cloud computing solutions to meet the requirement of specific

				applications. • Design application by utilizing cloud platforms such as Google app Engine and Amazon Web Services. • Analyze different cloud programming models.
PG3BE10	Advanced Computer Graphics & Animation	National	The goal of the course is to provide a strong foundation for computer graphics principles, and provide a hands-on introduction to recent advanced topics.	• Explain the basic concepts in computer graphics. • Analyze various algorithms and to convert the basic geometrical primitives. • Demonstrate the importance of viewing and clipping. • Discuss the fundamentals of animation • Describe Interpolation-Based

				Animation
PG3BE11	Big Data Analytics	National	Understand the main Big Data tools and the use of predictive analytics on big data.	• Explain Characteristics and challenges of Big Data • Describe Big Data Analytics • Utilize Hadoop for Big Data Technologies • Demonstrate MAPREDUCE Programming • Describe types of Recommendation Systems using Big Data Analytics.
PG3BE12	Deep Learning	National	Deep learning algorithms extract layered high-level presentations of data in a way that maximizes performance on a given	• Explain Deep learning • Analyze different methods used for modeling • Choose appropriate model according to application

			task.	• Compare various learning methods • Explain Applications in Object Recognition and Computer Vision
PG4B17	Principles Of Internet Of Things	National	To understand the fundamentals of Internet of Things. To apply the concept of fundamentals of Internet of Things in the real world scenario	• Explain the basic concepts of IoT. • Discuss physical and logical design of IoT enabled technologies. • Analyze how and where IoT can be applied. • Compare M2M and IoT. • Describe the features of Python used for IoT implementation.
PG4B18	Project	National	Implement project management knowledge, processes, lifecycle and	• Discuss project development and the associated business

			the embodied concepts, tools and techniques in order to achieve project success.	processes. • Analyze problems and formulate solutions. • Communicate with engineers and the community at large in written and oral forms. • Create effective communication skills for presentation. • Plan as an individual or in a team in development of technical projects.

2018 -2019

COURSE CODE	COURSE TITLE	NATURE OF THE COURSE (LOCAL/ NATIONAL/ REGIONAL/GLOBAL)	COURSE DESCRIPTION	COURSE OBJECTIVES
PG1B1	Advanced Programming In Java	National	To understand the Networking concept using TCP/IP and RMI. To design and develop java program using Swings Components.	• To understand the Java environment and OOP • To learn Java application development using Swings and JSP • To explore advanced Java concepts and to develop user friendly GUI based web Applications
PG1B2	Distributed Operating Systems	National	To understand the concept of design and implementation in the context of distributed	• To provide foundation on Operating Systems Concepts • To stress the importance of client server architecture and how

			operating systems.	sharing of resources is done using OS
PG1B3	Object Oriented Software Engineering	National	To understand a systematic discipline, quantifiable approach to the design development operation and maintenance of software using object oriented concept. To understand and apply different Object Oriented development models	• The trend being object oriented programming, the focus shifts to object oriented software engineering. • To understand the nuances of object oriented software engineering. • To reduce the academic-industry gap.
PG1B4	Theory Of Computation	National	To introduce the concept of automata theory, the theory of formal languages and	• To introduce the mathematical foundation of computation including automata theory, the theory of formal languages and

			grammars to understand the properties of physical machines	grammars. • To develop ability to understand and conduct mathematical proofs for computation and algorithms.
PG1B5	Lab-I- Advanced Programming In Java	National	To implement Server Side Program with Servlets. To develop java program using JSP.	• To understand the Java environment • To learn Java application development using Swings and Middleware technology • To explore advanced Java concepts • To write web based programs using JSP
PG1B6	Lab-II- Operating System	National	To introduce the students to LINUX kernel programming To make the students	• To familiarize students with the concepts, design and structure of the LINUX operating system. • Understand different LINUX shell

			aware of the features and capabilities of Linux so that they can utilize its improved functionalities	scripts and execute various shell programs. • Use the Linux command line interface for basic user, file and system maintenance operations. • To manipulate file permissions and have a basic understanding of system security.
PGBEDC1	Web Development	National	To enhance the knowledge of the students in effective webpage designing. To provide skills to sharply focus on needed information to be presented in a website.	• To offer a job oriented course • To help them design animated applications in Flash • To teach the techniques in Photoshop for editing photos, designing cover for books and magazines
PG2B7	Extreme	National	To understand the	• To introduce and form a

	Programming – Asp.Net		Architecture of ASP.NET To acquire a working knowledge of the .NET programming model	foundation on .Net platform • To reduce the industry academic gap meeting the industrial demands
PG2B8	Mobile Application Development Using Android Studio	National	Develop a grasp of the android OS architecture. Understand the application development lifecycle.	• Develop high-level plans using script solutions for mobile and evaluate the post-production outcome • Design scripts to meet given interface and media control requirements • Devise, carry out and evaluate functional test strategies of mobile design • Implement and evaluate techniques for the installation of mobile applications and delivery

				via various channels • Model and manage mobile application development using a range of methods
PG2B9	Design And Analysis Of Algorithms	National	Develop your ability to articulate processes for solving problems and to implement those processes efficiently within software.	• To stress the importance of the efficiency in writing programs • To write algorithms efficient in terms of design and time complexity
PG2B10	Lab-III - Extreme Programming - Asp.Net	National	To design and develop dynamic Control and validate the inputs by validation controls To design and develop different State Management Techniques	• To develop the skill of programming in .Net platform • To develop platform independent web based applications

PG2B11	Lab-IV– Mobile Application Development Using Android Studio	National	Identify ,analyze and choose tools for android development including device emulator, profiling tools and IDE	• Develop enterprise-level mobile solutions, by taking full advantage of the capabilities of the adopted platform/framework • Install and configure Android application development tools. • Design and develop user Interfaces for the Android platform. • Save state information across important operating system events. • Apply programming concepts to Android application development. • Designing and develop mobile applications using a chosen application development

				framework
PG2BE1	Computational Intelligence	National	Able to assess the nature of a problem at hand and determine whether a machine learning technique /algorithm can solve it efficiently enough.	• Throws light on all categories of Evolutionary Computing • To motivate to pursue research
PG2BE2	Neural Networks	National	To understand the fundamentals of Neural Networks To apply various models and learning algorithms for the real world scenario	• To introduce and provide a foundation on neural networks • To create interest in research
PG2BE3	Software Quality Assurance &	National	To give strong foundation in software quality assurance by	• To teach the concepts of software quality assurance and testing

	Testing		teaching standards, models and measurement techniques. To enhance the knowledge of the students to provide innovative solutions to various quality assurances related problems.	• To make the students industry ready by giving the knowledge to ensure the quality of the software
PG2BE4	Embedded Systems	National	To Improve capabilities of using the technical knowledge of processor architecture, peripherals, programming, and CAD tools to design specific embedded computer	• To create interest in low level system programming • To help students venture in to embedded designing concepts

			systems.	
PGBEDC2	Web Development	National	To enhance the knowledge of the students in effective webpage designing. To provide skills to sharply focus on needed information to be presented in a website.	• To offer a job oriented course • To help them design animated applications in Flash • To teach the techniques in Photoshop for editing photos, designing cover for books and magazines
PG3B10	Digital Image Processing	National	Design and implement algorithms for advanced image analysis Assess the performance of image processing algorithms and systems.	• To inculcate ideas and create interest in processing images techniques. • To provide a research orientation inducing them to pursue research.
PG3B11	Data Mining And Data	National	To interpret the contribution of data	• To explore the concepts and techniques of knowledge

	Warehousing		mining and data warehousing to the decision support level of organizations To understand different models used for OLAP and data pre-processing	discovery and data mining in a multi disciplinary perspective. • To present an organized framework of data mining techniques, applications and research directions. • To understand and implement classification and Clustering algorithms in Data Mining • To assess the strength and weakness of various algorithms and to analyze their behaviour.
PG3B12	Cryptography And Network Security	National	Understand the most common type of cryptographic algorithm	• To know the methods of conventional encryption. • To understand the concepts of public key encryption • To understand authentication

				and Hash functions. • To know the network security tools and applications. • To understand the system level security used.
PG3B13	Lab-III - Digital Image Processing	National	Design and implement algorithms that perform basic image processing	• To become proficient at image processing techniques. • Concepts to be implemented using programming language only. No readymade tools to be used.
PG3BE5	Mobile Computing	National	To introduce the concept of mobile computing and provide a foundation for research.	• To introduce the concept of mobile computing and provide a foundation for research.
PG3BE6	Cloud	National	Main focus is on parallel	• To learn distributed

	Computing		programming techniques for cloud computing and large scale distributed systems which form the cloud infrastructure.	communication • To understand distributed resource management • To study the basics of cloud computing • To study about virtualization and cloud resource management
PG3BE7	Advanced Computer Graphics & Animation	National	The goal of the course is to provide a strong foundation for computer graphics principles, and provide a hands-on introduction to recent advanced topics.	• To understand the basics of geometry processing. • To understand the fundamentals of pipelined rasterization rendering of meshed objects and curved surfaces. • To understand and work with advanced rendering methods such as radiosity. • To design programs for advanced

				animation methods and • To become proficient at graphics programming using OpenGL
PG3BE8	Distributed Database	National	Aware of the main techniques for managing a distributed database management system and be able to design a simple distributed database system	• To learn the key concepts and techniques for distributed database implementation, such as data storage, indexing, query evaluation, query optimization, transaction management, concurrency control and cash recovery. • To discuss the principles and techniques for database replication and reliability.
PG3B14	Internship	National	Acquire knowledge of the industry in which the internship is done.	• To enrich them with real time work experience.

			Identify areas for future knowledge and skill development.	
PG4B15	Principles Of Internet Of Things	National	To understand the application areas of IOT To realize the revolution of Internet in Mobile Devices, Cloud & Sensor Networks	• To understand the fundamentals of Internet of Things. • To apply the concept of Internet of Things in the real world scenario.
PG4B16	Project	National	Implement project management knowledge, processes, lifecycle and the embodied concepts, tools and techniques in order to achieve project success.	• To provide real time work experience and improve communication skills • To develop real time problem solving skills

2017 -2018

COURSE CODE	COURSE TITLE	NATURE OF THE COURSE (LOCAL/ NATIONAL/ REGIONAL/GLOBAL)	COURSE DESCRIPTION	COURSE OBJECTIVES
PG1B1	Advanced Programming In Java	National	To understand the Networking concept using TCP/IP and RMI. To design and develop java program using Swings Components.	• To understand the Java environment and OOP • To learn Java application development using Swings and JSP • To explore advanced Java concepts and to develop user friendly GUI based web Applications
PG1B2	Design And Analysis Of Algorithms	National	Develop your ability to articulate processes for solving problems and to implement those	• To stress the importance of the efficiency in writing programs • To write algorithms efficient in

			processes efficiently within software.	terms of design and time complexity
PG1B3	Object Oriented Software Engineering	National	To understand a systematic discipline, quantifiable approach to the design development operation and maintenance of software using object oriented concept. To understand and apply different Object Oriented development models	• The trend being object oriented programming, the focus shifts to object oriented software engineering. • To understand the nuances of object oriented software engineering. • To reduce the academic-industry gap.
PG1B4	Theory Of Computation	National	To introduce the concept of automata theory, the theory of formal languages and	• To introduce the mathematical foundation of computation including automata theory, the theory of formal languages and

			grammars to understand the properties of physical machines	grammars. • To develop ability to understand and conduct mathematical proofs for computation and algorithms.
PG1B5	Lab-I- Programming In Java	National	To implement Server Side Program with Servlets. To develop java program using JSP.	• To understand the Java environment • To learn Java application development using Swings and Middleware technology • To explore advanced Java concepts • To write web based programs using JSP
PGBEDC1	Multimedia Applications - I	National	To enhance the knowledge of the students in effective webpage designing.	• To offer a job oriented course • To help them design animated applications in Flash

			To provide skills to sharply focus on needed information to be presented in a website.	• To teach the techniques in Photoshop for editing photos, designing cover for books and magazines
PG2B6	Extreme Programming – Asp.Net	National	To understand the Architecture of ASP.NET To acquire a working knowledge of the .NET programming model	• To introduce and form a foundation on .Net platform • To reduce the industry academic gap meeting the industrial demands
PG2B7	Compiler Design	National	Introduce the theory and tools that can be employed in order to perform syntax-directed translation of a high-level programming language into an executable code.	• To provide knowledge on system oriented concepts • To help them to write efficient programs, understanding the implementation requirements

PG2B8	Distributed Operating Systems	National	To understand the concept of design and implementation in the context of distributed operating systems.	• To provide foundation on Operating Systems Concepts • To stress the importance of client server architecture and how sharing of resources is done using OS
PG2B9	Lab-III - Extreme Programming - Asp.Net	National	To design and develop dynamic Control and validate the inputs by validation controls To design and develop different State Management Techniques	• To develop the skill of programming in .Net platform • To develop platform independent web based applications
PG2BE1	Computational Intelligence	National	Throws light on all categories of Evolutionary Computing	• Throws light on all categories of Evolutionary Computing • To motivate to pursue research

			To motivate to pursue research	
PG2BE2	Neural Networks	National	To understand the fundamentals of Neural Networks To apply various models and learning algorithms for the real world scenario	• To introduce and provide a foundation on neural networks • To create interest in research
PG2BE3	Software Quality Assurance & Testing	National	To give strong foundation in software quality assurance by teaching standards, models and measurement techniques. To enhance the knowledge of the	• To teach the concepts of software quality assurance and testing • To make the students industry ready by giving the knowledge to ensure the quality of the software

			students to provide innovative solutions to various quality assurances related problems.	
PG2BE4	Embedded Systems	National	To create interest in low level system programming To help students venture in to embedded designing concepts	• To create interest in low level system programming • To help students venture in to embedded designing concepts
PGBEDC2	Multimedia Applications - II	National	To enhance the knowledge of the students in effective webpage designing. To provide skills to sharply focus on needed information to be	• To offer a job oriented course • To help them design animated applications in Flash • To teach the techniques in Photoshop for editing photos, designing cover for books and

			presented in a website.	magazines
PG3B10	Digital Image Processing	National	Design and implement algorithms for advanced image analysis Assess the performance of image processing algorithms and systems.	• To inculcate ideas and create interest in processing images techniques. • To provide a research orientation inducing them to pursue research.
PG3B11	Data Mining And Data Warehousing	National	To interpret the contribution of data mining and data warehousing to the decision support level of organizations To understand different models used for OLAP and data pre-processing	• To explore the concepts and techniques of knowledge discovery and data mining in a multi disciplinary perspective. • To present an organized framework of data mining techniques, applications and research directions. • To understand and implement classification and Clustering

				algorithms in Data Mining • To assess the strength and weakness of various algorithms and to analyze their behaviour.
PG3B12	Cryptography And Network Security	National	Understand the most common type of cryptographic algorithm	• To know the methods of conventional encryption. • To understand the concepts of public key encryption • To understand authentication and Hash functions. • To know the network security tools and applications. • To understand the system level security used.
PG3B13	Lab-III- Digital Image Processing	National	Design and implement algorithms that perform	• To become proficient at image processing techniques.

			basic image processing	• Concepts to be implemented using programming language only. No readymade tools to be used.
PG3BE5	Mobile Computing	National	To introduce the concept of mobile computing and provide a foundation for research.	• To introduce the concept of mobile computing and provide a foundation for research.
PG3BE6	Cloud Computing	National	Main focus is on parallel programming techniques for cloud computing and large scale distributed systems which form the cloud infrastructure.	• To learn distributed communication • To understand distributed resource management • To study the basics of cloud computing • To study about virtualization and cloud resource management

PG3BE7	Advanced Computer Graphics & Animation	National	The goal of the course is to provide a strong foundation for computer graphics principles, and provide a hands-on introduction to recent advanced topics.	• To understand the basics of geometry processing. • To understand the fundamentals of pipelined rasterization rendering of meshed objects and curved surfaces. • To understand and work with advanced rendering methods such as radiosity. • To design programs for advanced animation methods and • To become proficient at graphics programming using OpenGL
PG3BE8	Distributed Database	National	Aware of the main techniques for managing a distributed database management	• To learn the key concepts and techniques for distributed database implementation, such as data storage, indexing, query

			system and be able to design a simple distributed database system	evaluation, query optimization, transaction management, concurrency control and cash recovery. • To discuss the principles and techniques for database replication and reliability.
PG3B14	Internship	National	Acquire knowledge of the industry in which the internship is done. Identify areas for future knowledge and skill development.	• To enrich them with real time work experience.
PG4B15	Principles Of Internet Of Things	National	To understand the application areas of IOT To realize the revolution of Internet in Mobile	• To understand the fundamentals of Internet of Things. • To apply the concept of Internet of Things in the real world

			Devices, Cloud & Sensor Networks	scenario.
PG4B16	Project	National	Implement project management knowledge, processes, lifecycle and the embodied concepts, tools and techniques in order to achieve project success.	• To provide real time work experience and improve communication skills • To develop real time problem solving skills

2016 -2017

COURSE CODE	COURSE TITLE	NATURE OF THE COURSE (LOCAL/ NATIONAL/ REGIONAL/GLOBAL)	COURSE DESCRIPTION	COURSE OBJECTIVES
PG1B1	Design And Analysis Of Algorithms	National	Develop your ability to articulate processes for solving problems and to implement those	• To stress the importance of the efficiency in writing programs • To write algorithms efficient in

			processes efficiently within software.	terms of design and time complexity
PG1B2	Advanced Programming In Java	National	To introduce the concepts of OO Programming and to develop Multithreaded Programs To develop user friendly GUI Applications and make the students proficient in web applications	• To understand the Java environment and OOP • To learn Java application development using Swings and JSP • To explore advanced Java concepts and to develop user friendly GUI based web Applications
PG1B3	Object Oriented Software Engineering	National	The trend being object oriented programming, the focus shifts to object oriented software engineering. To understand the	• The trend being object oriented programming, the focus shifts to object oriented software engineering. • To understand the nuances of object oriented software

			nuances of object oriented software engineering. To reduce the academic-industry gap.	engineering. • To reduce the academic-industry gap.
PG1B4	Theory Of Computation	National	To introduce the mathematical foundation of computation including automata theory, the theory of formal languages and grammars. To develop ability to understand and conduct mathematical proofs for computation and algorithms.	• To introduce the mathematical foundation of computation including automata theory, the theory of formal languages and grammars. • To develop ability to understand and conduct mathematical proofs for computation and algorithms.

PG1B5	Lab-I- Advanced Programming In Java	National	To learn the fundamentals and GUI Environments of Java	• To understand the Java environment • To learn Java application development using Swings and Middleware technology • To explore advanced Java concepts • To write web based programs using JSP
PGBEDC1	Multimedia Applications-I	National	To offer a job oriented course . To help them design animated applications in Flash . To teach the techniques in Photoshop for editing photos, designing cover	• To offer a job oriented course • To help them design animated applications in Flash • To teach the techniques in Photoshop for editing photos, designing cover for books and magazines

			for books and magazines	
PG2B6	Extreme Programming – Asp.Net	National	To introduce and form a foundation on .Net platform To reduce the industry academic gap meeting the industrial demands	• To introduce and form a foundation on .Net platform • To reduce the industry academic gap meeting the industrial demands
PG2B7	Compiler Design	National	To provide knowledge on system oriented concepts To help them to write efficient programs, understanding the implementation requirements.	• To provide knowledge on system oriented concepts • To help them to write efficient programs, understanding the implementation requirements
PG2B8	Distributed	National	To provide foundation	• To provide foundation on

	Operating Systems		on Operating Systems Concepts. To stress the importance of client server architecture and how sharing of resources is done using OS	Operating Systems Concepts • To stress the importance of client server architecture and how sharing of resources is done using OS
PG2B9	Lab-II- Extreme Programming	National	To develop the skill of programming in .Net platform. To develop platform independent web based applications	• To develop the skill of programming in .Net platform • To develop platform independent web based applications
PG2BE1	Computational Intelligence	National	Able to assess the nature of a problem at hand and determine whether a machine	• Throws light on all categories of Evolutionary Computing • To motivate to pursue research

			learning technique/algorithm can solve it efficiently enough.	
PG2BE2	Neural Networks	National	To introduce and provide a foundation on neural networks To create interest in research	• To introduce and provide a foundation on neural networks • To create interest in research
PG2BE3	Software Quality Assurance & Testing	National	To teach the concept of software quality assurance and testing To make the students industry ready.	• To teach the concepts of software quality assurance and testing • To make the students industry ready by giving the knowledge to ensure the quality of the software
PG2BE4	Embedded Systems	National	To Improve capabilities of using the technical knowledge of processor	• To create interest in low level system programming • To help students venture in to

			architecture, peripherals, programming, and CAD tools to design specific embedded computer systems.	embedded designing concepts
PGBEDC2	Multimedia Applications-II	National	To offer a job oriented course To teach them to design animated applications in Flash To introduce the techniques available in Photoshop used for editing photos, designing cover for books and magazines.	• To offer a job oriented course • To help them design animated applications in Flash • To teach the techniques in Photoshop for editing photos, designing cover for books and magazines
PG3B10	Computer	National	To inculcate ideas and	• To inculcate ideas and create

	Graphics And Image Processing		create interest in processing images techniques. To provide a research orientation inducing them to pursue research.	interest in processing images techniques. • To provide a research orientation inducing them to pursue research.
PG3B11	Mobile Computing	National	To introduce the concept of mobile computing and provide a foundation for research.	• To introduce the concept of mobile computing and provide a foundation for research.
PG3B12	Distributed Database	National	To learn the key concepts and techniques for distributed database implementation, such as data storage,	• To learn the key concepts and techniques for distributed database implementation, such as data storage, indexing, query evaluation, query optimization, transaction management,

			indexing, query evaluation, query optimization, transaction management, concurrency control and cash recovery. To discuss the principles and techniques for database replication and reliability.	concurrency control and cash recovery. • To discuss the principles and techniques for database replication and reliability.
PG3B13	Lab-III- Computer Graphics And Image Processing	National	To develop the skill of programming in graphics and image processing techniques. Concepts to be implemented using	• To develop the skill of programming in graphics and image processing techniques. • Concepts to be implemented using programming language only. No readymade tools to be

			programming language only. No readymade tools to be used.	used.
PG3BE5	Cryptography	National	To introduce the concepts of secure communication To make them learn through case studies	• To introduce the concepts of secure communication • To make them learn through case studies
PG3BE6	Data Mining And Data Warehousing	National	To introduce and form a firm foundation in programming To stress the importance of clarity, simplicity and the efficiency in writing programs	• To introduce and form a firm foundation in programming • To stress the importance of clarity, simplicity and the efficiency in writing programs
PG3BE7	Distributed	National	To introduce the	• To introduce the concept of

	Computing		concept of distributed operating systems and their functions	distributed operating systems and their functions
PG3BE8	Modelling And Simulation	National	To create interest in modelling and simulation techniques To motivate them to pursue research	• To create interest in modeling and simulation techniques • To motivate them to pursue research
PG3B14	Internship	National	To enrich them with real time work experience.	• To enrich them with real time work experience.
PG4B15	Principles Of Information Security (Self Study)	National	To enable students to get sound understanding of Information Security To equip with knowledge and skills necessary to support for their career	• To enable students to get sound understanding of Information Security • To equip with knowledge and skills necessary to support for their career in IT • To develop an attitude and

			in IT To develop an attitude and interest for acquiring necessary knowledge through self learning	interest for acquiring necessary knowledge through self learning
PG4B16	Project	National	To provide real time work experience and improve communication skills To develop real time problem solving skills	• To provide real time work experience and improve communication skills • To develop real time problem solving skills