FATIMA COLLEGE (AUTONOMOUS), MADURAI – 625018

2020 - 2021

CRITERION 1 - CURRICULAR ASPECTS

1.1.1 Curricula developed and implemented have relevance to the local, national, regional and global developmental needs which is reflected in Programme outcomes (POs), Programme specific outcomes (PSOs) and Course Outcomes (COs), of the Programmes offered by the Institution.

NAME OF THE PROGRAMME: BACHELOR OF COMPUTER APPLICATIONS **PROGRAMME CODE : USCA**

PROGRAMME OUTCOMES:

PO 1	Understand, analyze and apply the concepts of latest technologies to bring solutions to the problems in the areas of computer applications.
PO 2	Analyze and synthesize computing systems through quantitative and qualitative techniques along with effective verbal and non-verbal communication.
PO 3	Apply technical and professional skills practically to excel in providing solutions for solving complex real life problems satisfying industrial and societal needs.

PO 4	Understand &analyze the technical data through innovative methodologies with legal ethics to reach out actionable conclusions.
PO 5	To promote leadership skills and also as an individual on working with multi disciplinary projects using Modern computing tools and Open Source Technologies.
PO 6	Commit to professional ethics and cyber regulations considering the societal and environmental issues within local and global contexts for sustainable development

PROGRAMME SPECIFIC OUTCOMES:

PSO 1	To achieve significant understanding of theoretical and programming concepts in key areas of Computer Applications.
PSO 2	To expand and sharpen practical and problem solving skills to provide solutions to industry, society and business problems.
PSO 3	To apply modern practices and strategies in software project development using open source and other programming environments.

PSO 4	To inculcate the ability to analyze and interpret problems, make inferences from the resulting data and apply technical skills to solve real time problems.
PSO 5	To make graduates understand various professional, technical and ethical issues prevailing in the industry
PSO 6	To gain exposure in preventive, ethical hacking and security technologies in recent trends
PSO 7	To equip the students to meet the requirement of corporate world and Industry standards
PSO 8	To engage in professional development and to pursue post graduate education in the fields of Information Technology and Computer Applications
PSO 9	To generate ideas of innovation and to identify, formulate and solve problems in software solutions, outsourcing services, public and private sectors
PSO 10	To engage the students technically on par with the societal and environmental responsibilities added with professional ethics

Course Code	Course Title	Nature of the Course (Local/ National/ Regional/ Global)	Course Description	Course Outcomes
19J1CC1	PROGRAMMING IN C	Global	To learn the basic knowledge of structured programming in C control structures, data structures and functions along with basic problem-solving techniques	CO1: Acquire basic understanding of C programming CO2: Illustrate how arrays and strings are implemented in C CO3: Utilize the knowledge of Functions and Pointers CO4: Analyze the memory management concept in C using structure and Unions CO5: Outline the file operations in C
19J1CC2	LAB IN C PROGRAMMING	Global	To learn the practical implementation of	CO1: Acquire basic understanding of C programming

			structured programming using control structures, data structures and functions along with basic problem-solving techniques	CO2: Illustrate how arrays and strings are implemented in C CO3: Utilize the knowledge of Functions and Pointers CO4: Analyze the memory management concept in C using structure and Unions CO5: Outline the file operations in C
19J1NME	NON-MAJOR ELECTIVE – I MULTIMEDIA LAB – FLASH	Global	This course helps to become familiar with the elements and tools in Flash that is used to create interactive animated media such as motion graphics, videos, presentations and websites	CO1: Apply tweens and articulated motions to morph shapes CO2: Design, create and edit flash-based navigation menus and interactive movies CO3: Utilize flash components to create interactivity

				CO4: Demonstrate load, control and remove movie clips and masks in movie content CO5: Utilize and understand different sounds and sound formats in flash movies Publish flash movies in numerous formats and contexts in a
19J2CC3	OBJECT ORIENTED PROGRAMMING IN C++	Global	To get better understanding in the OOPS Concept and to have basic knowledge in writing programs using C++ Programming	CO1: Assess the object – oriented concepts in C++ CO2: Illustrate the usage of Functions in C++ CO3: Analyze advanced features of C++ specifically stream I/O and overloading

				CO4: Demonstrate on Inheritance and Virtual Classes CO5: Outline the file operations in C++
19J2CC4	LAB IN C++	Global	To learn the basic knowledge of Object-Oriented Programming in C++ and write code in all aspects of C++ Language	CO1: Read, understand and trace the execution of programs written in C++ language CO2: Demonstrate class and object functions CO3: Assess operator overloading and function overloading to specific problem definition CO4: Demonstrate file operations in C++. CO5: Write C++ code to demonstrate each concept

19J3CC5	OPERATING SYSTEMS	Global	To Study about the concepts, structure and mechanisms of operating systems. To examine the operations of processes and threads, scheduling, deadlock, memory management and file systems	CO1: Outline the structure of OS, basic architectural components CO2: Analyze on the different scheduling algorithms and critical section problems CO3: Critique device and resource management techniques by concentrating on deadlocks CO4: Identify and know about memory management techniques CO5: Interpret the mechanisms adopted for file sharing in distributed Applications
19J3CC6	LAB IN RELATIONAL DATABASE	Global	To have in-depth knowledge in the database concepts.	CO1: Understand the basic concepts of database and relational database management systems

	MANAGEMENT SYSTEMS			CO2: Analyze the various normalization concepts CO3: Disseminate SQL commands to create tables and indexes CO4: Apply DDL and DML commands in real time applications CO5: Write dynamic queries and programming language SQL to demonstrate the concept of RDBMS
19AC3ACJ3	PRINCIPLES OF FINANCIAL ACCOUNTING AND ACCOUNTING PACKAGE	Global	This course provides the accounting language's essentials that helps to read and interpret financial statements for	CO 1: Understand the basic concepts of company creation in tally CO 2: It tells how to work with Journals, Ledgers and Cash Flow Statements.

			business diagnosis and decision–making.	CO 3: It is the language that managers use to communicate with the terms of accounting. CO 4: The firm's financial and economic information can be shared to external parties such as shareholders and creditors. CO 5: Create and display single and multiple stock groups and stock categories
19J3SB1	SKILL BASED – I QUANTITATIVE APTITUDE	National	To improve aptitude, problem solving skills and reasoning ability that helps to focus on their career development	CO1: Apply quantitative techniques to solve variety of problems. CO2: Perform statistical analysis to interpret information. CO3 Apply the aptitude tricks, shortcuts and formulas

				CO4: Acquire clear understanding on easily solving the reasoning. CO 5: Focuses in clearing the competitive, Campus and entrance online tests
19J4CC7	DATA STRUCTURES AND ALGORITHMS	Global	To give better understanding of how algorithms are developed along their appropriate data structures which have both historical and contemporary significance	CO1: To understand about writing algorithms and step by step approach in solving problems with the help of fundamental data structures. CO2: To disseminate knowledge in Abstract Data Types. CO3: To Work with Tree Traversals. CO4: To analyze the different searching and sorting techniques.

				CO5: Analyze case studies to implement and comment about performance of algorithms.
19J4CC8	LAB IN WEB PROGRAMMING	Global	To impart knowledge on various concepts in internet – html – Active Server Pages.	CO1: Select and apply mark-up languages for processing and presenting information in web pages. CO2: Design and implement dynamic websites with good aesthetic sense of designing. CO3: Use fundamental skills to maintain web server services required to host a website. CO4: Prepare the students to write a well formed DB connection

				CO5: Create Webpages for any application using database connectivity
19J4AC4	DIGITAL PRINCIPLES AND COMPUTER ORGANIZATION	Global	To know about computers, learn the basics and take advantage of the latest technologies in the field of computers and information technology.	CO1: To impart the knowledge on various Number Systems and Boolean algebra CO2: To conceptualize the basics of organizational and architectural issues. CO3: To familiarize students about logic design, basic structure and behaviour of various functional modules of computer systems. CO4: Analyze the performance of Gates CO5: Conceptualize the basics of organizational and architectural

				issues of a digital computer with logics
19J4SB2	SKILL BASED – II DATA ANALYSIS USING SPREADSHEETS	Global	To gain in-depth knowledge in accounting package – Tally	CO1: Customize the Ribbons of Spreadsheets CO2: Perform statistical analysis using charts CO3: Apply the aptitude tricks, shortcuts and formulas CO4 Compare all the functions available CO5: Focuses on the protection of data in spreadsheets
J5CC11	COMPUTER NETWORKS	Global	This course helps to know about the layered architecture of different models and also the works of each	CO 1: To become an efficient administrator in networking side, the concept of data communication is being introduced.

			layer with security features.	CO 2: To disseminate knowledge in OSI and TCP stack and real time implementations. CO 3: Understand and building the skills of subnetting and routing mechanisms. CO 4: Familiarity with the basic protocols of computer networks, and how they can be used to assist in network design and implementation CO 5: To acquire detailed investigation of various threats and countermeasures in web and mobile security.
J5CC12	JAVA PROGRAMMING	Global	To acquire knowledge on Object Oriented	CO1: Acquire in depth knowledge in Java programming concepts

			Programming using Multithreading, Exceptions, GUI & database Applications	CO2: Identify and analyze platform independent environment and byte code generation CO3: Build, Execute and Debug java programs along with Exceptions CO4: Design and Implement packages CO5: Write, Compile and Execute applet programs which includes GUI
J5CC13	LAB V – JAVA PROGRAMMING	Global	To acquire practical knowledge on Object Oriented Programming using Multithreading, Exceptions, GUI & database Applications	CO1: Acquire in depth knowledge in Java programming concepts CO2: Identify and analyze platform independent environment and byte code generation CO3: Build, Execute and Debug java programs along with Exceptions CO4: Design and Implement packages

				CO5: Write, Compile and Execute applet programs which includes GUI
J5CC14	LAB VI – DOT NET PROGRAMMING	Global	To know the rapid development of powerful Window applications and Web application which makes the web development easier	CO1: Use Dot Net Framework along with the features of C. CO2: Create websites to explore database connectivity CO3: Analyze debugging Webpages through case studies CO4: Use the different types of master page creation CO5: Create different dynamic websites for applications
J5ME1	DOT NET PROGRAMMING	Global	To know the rapid development of powerful Window applications and Web	CO1: Understand the basic concept of dot net

			application which makes the web development easier.	CO2: Outline the control statements in dot net with sample programs CO3: Analyze procedures and structures in dot net with real time examples CO4: Disseminate knowledge in database with dot net CO5: Explore web application with vb.net and asp.net
J5ME2	COMPUTER GRAPHICS	Global	To know about computer graphics techniques and to implement the technologies in computer world.	CO1: Outline the need and basic concept of computer graphics CO2: Explore various algorithms and its designs CO3: Analyze the attributes of output primitives

				CO4: Disseminate knowledge in 2-Dimensional geometric transformations CO5: Explore the concepts of 2-Dimensional viewing
J5SB3	SKILL BASED – III CORELDRAW	Global	To introduce the concept of essential graphics and visual communication skills.	CO1: Outline the basic concepts of CorelDraw CO2: Explore drawing and colouring feature in CorelDraw CO3: Disseminate knowledge in mastering with text CO4: Outline the effects of applying in CorelDraw CO5: Explore how to work with bitmap commands

J5SB4	SKILL BASED – IV PHP	Global	To be familiar with the structured approach by identifying the needs, interests and functionalities that helps in creating dynamic websites	CO1: Demonstrate how server – side programming works on the web CO2: Use PHP built – in functions and creating custom functions CO3: Create a database in phpMyAdmin CO4: Create dynamic web pages CO5: Design websites for various applications
J6CC15	PYTHON	Global	This course helps to get knowledge in python language and to know about the different types of data like lists, dictionaries and files handling	CO1: Identify different Python object types CO2: Discuss how to use indexing and slicing to access data in Python programs CO3: Assess structure and components of a Python program

				CO4: Write programs to demonstrate loops and decision statements in Python CO5: Build and package in Python modules for reusability
J6CC16	LAB VII – PYTHON LAB	Global	This course helps to get practical knowledge in python language and to know about the different types of data like lists, dictionaries and files handling	CO1: Identify different Python object types CO2: Discuss how to use indexing and slicing to access data in Python programs CO3: Assess structure and components of a Python program CO4: Write programs to demonstrate loops and decision statements in Python

				CO5: Build and package in Python modules for reusability
J6ME3	ARTIFICIAL INTELLIGENCE	Global	To learn the need and basic concepts in artificial intelligence and their real time applications	CO1: Outline the needs and concepts of artificial intelligence in day-to-day life CO2: Explore various search techniques CO3: Disseminate various knowledge representation in AI CO4: Explore the uncertainty techniques involved in AI CO5: Analyze the learning concepts and methods
J6ME4	DATA MINING	Global	On Successful Completion of this subject the students should have knowledge	CO1: Analyze data mining algorithms, methods, and tools

			on Data mining Concepts	CO2: Identify business applications of data mining CO3: Predict quantitative analysis report to make decisions CO4: Outline the developing areas web mining, text mining, and ethical aspects of data mining CO5: Compare the various applications of Data Mining
J6ME5	CLOUD COMPUTING	Global	To give an introduction to cloud computing and its technologies	CO1: Outline problems and evaluate various cloud computing solutions CO2: Outline Cloud service and deployment models CO3: Identify the architecture and infrastructure of cloud computing including SaaS, PaaS, IaaS, public

				cloud, private cloud, hybrid cloud and community cloud CO4: Predict security issues and formulate recovery mechanisms CO5: Understand the concept of virtualization
J6ME6	MOBILE COMPUTING	Global	On Successful Completion of this subject the students should have knowledge on Mobile Computing Concepts and emerging technologies and applications.	CO1: Create the infrastructure to develop mobile communication systems CO2: Assess the characteristics of emerging technologies in mobile communication CO3: Critique new knowledge in the field of computer science by using appropriate search methodologies CO4: Analyze on the various software kits available

				CO5: Assess the characteristics of Mobile Components and Applications
J6SB5	SKILL BASED-V-ALICE	Global	To develop programming skills and impart animation techniques using Alice.	CO1: Explore the interface concepts in Alice CO2: Understand how to set the scene and characters in Alice CO3: Analyze the programming skills and expertise CO4: Disseminate various event handling techniques and methods CO5: Assess the characteristics of 3D and billboards and various sound effect options
J6SB6	SKILL BASED LAB-VI LINUX	Global	To have a depth knowledge about the functionalities of the	CO1: Analyze the inner workings of LINUX operating systems

			operating systems and have a thorough knowledge about the Linux programming.	CO2: Utilize Linux system to accomplish typical personal, office, technical, and software development tasks CO3: Use Linux utilities to create and manage simple file processing CO4: Use operations, organize directory structures with appropriate security CO5: Formulate shell scripts to perform more complex tasks