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Re-Accredited with 'A++' (CGPA 3.61) by NAAC (Cycle - IV)

Mary Land, Madurai - 625018, Tamil Nadu

#### FATIMA COLLEGE (AUTONOMOUS), MADURAI – 625018

2021 - 2022

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: BCA

#### **Programme Outcomes (POs)**

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	and Open-Source Technologies.
PO 5	Ethics: Commit to professional ethics and cyber regulations considering the societal and environmental issues within local and global contexts for sustainable development

### **Programme Specific Outcomes (PSOs)**

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



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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 Outcomes (COs)**

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	CO1: Acquire basic understanding of C



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			programming in C	programming
			control structures, data structures and functions along with	strings are implemented in C
			basic problem-	Functions and Pointers
			solving techniques	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 structured programming using control structures, data structures and	understanding of C programming  CO2: Illustrate how arrays and strings are implemented in C



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solving techniques  management concept in C ustructure and Unions  CO5: Outline the file operation in C  This course helps to become familiar with the elements and tools in Alice that is used to create interactive animated  NON MAJOR ELECTIVE - I ANIMATION Global  TOOLS AND  Solving techniques  management concept in C ustructure and Unions  CO1: Apply object properties methods and events  CO2: Design, create and animation scenes and interactive movies  CO3: Utilize event handling				functions along with	Functions and Pointers
structure and Unions  CO5: Outline the file operation in C  This course helps to become familiar with the elements and tools in Alice that is  ANIMATION Global Global used to create interactive animated  Structure and Unions  CO1: Apply object properties methods and events  CO2: Design, create and animation scenes and interactive movies  CO3: Utilize event handling					CO4: Analyze the memory management concept in C using
This course helps to become familiar with the elements and tools in Alice that is animation scenes and interactive movies  CO1: Apply object propertion methods and events  CO2: Design, create and animation scenes and interactive movies  CO3: Utilize event handling					
This course helps to become familiar with the elements and tools in Alice that is animation scenes and interactive movies  This course helps to become familiar with the elements and tools in Alice that is interactive movies  TOOLS AND  This course helps to methods and events  CO2: Design, create and animation scenes and interactive movies  CO3: Utilize event handling					in C
become familiar with NON MAJOR ELECTIVE – I ANIMATION TOOLS AND  become familiar with the elements and tools in Alice that is used to create interactive animated  CO2: Design, create and animation scenes and interactive movies  CO3: Utilize event handling					CO1: Apply object properties,
NON MAJOR ELECTIVE - I ANIMATION TOOLS AND  The elements and tools in Alice that is used to create interactive animated  CO2: Design, create and animation scenes and interactive movies  CO2: Design, create and animation scenes and interactive movies  CO2: Design, create and animation scenes and interactive movies  CO2: Design, create and animation scenes and interactive movies				This course helps to	methods and events
creation and movie CO4: Demonstrate story box making and animation movies	21J1NME	ELECTIVE - I ANIMATION TOOLS AND	Global	the elements and tools in Alice that is used to create interactive animated media such as scene creation and movie	interactive movies  CO3: Utilize event handling methods and properties  CO4: Demonstrate story boards and animation movies



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				different sounds and sound formats in alice
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++ PROGRAMMING	Global	To learn the basic knowledge of Object- Oriented	CO1: Read, understand and trace the execution of programs written in C++ language



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			Programming in C++	CO2: Demonstrate class and
			and write code in all	object functions
			aspects of C++ Language	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
21J2NME	NON MAJOR ELECTIVE - II ANIMATION TOOLS AND TECHNIQUES	Global	This course helps to become familiar with the elements and tools in Alice that is used to create interactive animated media	CO1: Apply object properties, methods and events  CO2: Design, create and edit animation scenes and interactive movies  CO3: Utilize event handling



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			such as scene creation and movie	methods and properties  CO4: Demonstrate story boards
			making.	and animation movies  CO5: Utilize and understand different sounds and sound formats in alice
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



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				CO4: Identify and know about memory management techniques  CO5: Interpret the mechanisms adopted for file sharing in distributed Applications
19J3CC6	LAB IN RELATIONAL DATABASE MANAGEMENT SYSTEMS	Global	To learn Relational Database concepts and to work with dynamic, reflective, object- oriented concepts through Query processing	CO1: Critique SQL commands to create tables and indexes  CO2: Apply DDL and DML commands in real time applications  CO3: Understand the needs of triggering applications  CO4: Disseminate knowledge of RDBMS and SQL, both in terms of design and implementation



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				Usage  CO5: Write dynamic queries to demonstrate the concepts of RDBMS  CO 1: Understand the basic
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 business diagnosis and decision–making.	concepts of company creation in tally  CO 2: It tells how to work with Journals, Ledgers and Cash Flow Statements.  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



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				as shareholders and creditors.  CO 5: Create and display single and multiple stock groups and stock categories
19J3SB1	SKILL BASED - I LOGICAL REASONING AND DATA INTERPRETATION	Global	To improve aptitude, problem solving skills and reasoning ability that helps to focus on their career	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  CO5: Focuses in clearing the competitive, Campus and entrance



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			development	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 understand web design	CO1: Select and apply mark-up languages for processing and presenting information in web pages.



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			principles	CO2: Design and implement dynamic
			and	websites with good aesthetic sense of
			technologies	designing.
			and to create web pages	CO3: Use fundamental skills to maintain
			with	web server services required to host a
			emerging	website.
			and existing	CO4: Prepare the students to write a well
			technologies	formed DB connection
			added with scripting.	CO5: Create Webpages for any application
			001-P 011-8	using database connectivity
			To know	CO1: Identify the anatomy of
			about	computers
	DIGITAL PRINCIPLES		computers,	CO2: Compare the various memory
19P4ACJ4	AND COMPUTER		learn the	units along with the storage devices
	ORGANIZATION		basics and	CO3: Demonstrate and perform
		Global	take	computer arithmetic operations on
			advantage of	integer and real numbers
			the latest	



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			technologies	CO4: Analyze the performance of Gates
			in the field of	CO5: Conceptualize the basics of
			computers	organizational and architectural
			and	issues of a digital computer with
			information	logics
			technology.	
19J4SB2	SKILL BASED - II DATA ANALYSIS USING SPREADSHEETS	Global	To enable the students in crafting professional excel spread sheets and to familiarize the students in preparation	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
			of analysis in	
			data and	



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	presentations	
	with	
	automation	
	tools.	



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19J5CC9	SOFTWARE ENGINEERING	Global	Aims to provide a thorough knowledge about various phases involved in software development along with the testing techniques.	skills and modern tools necessary
19J5CC10	JAVA PROGRAMMING	Global	To acquire 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



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				CO4: Design and Implement packages
				CO5: Write, Compile and Execute
				applet programs which includes GUI
19J5CC11	LAB V – JAVA	Global	To acquire practical	
	PROGRAMMING		knowledge on Object	Java programming concepts
			Oriented Programming using	CO2: Identify and analyze platform
			Multithreading, Exceptions,	independent environment and byte
			GUI & database Applications	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



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19J5CC12	LAB IN 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
19J5ME1	CLOUD COMPUTING	Global	To learn the basic knowledge of structured programming in C control structures, data structures and functions along with basic problem solving techniques.	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



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				community cloud  CO4: Predict security issues and formulate recovery mechanisms  CO5: Understand the concept of virtualization	
19J5ME2	MOBILE COMPUTING	Global	To be acquainted with the Mobile Application Development Platform and its Architectures, GSM, GPRS, 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	



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				Mobile Components and Applications
19J5SB3	SKILL BASED – III LAB IN ANIMATION TECHNIQUES	Global	This course gives knowledge on the editing of images and created animated images.	of Photoshop



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19J5SB4	SKILL BASED – IV LAB	Global	This course helps to	CO1: Understand E-Learning with
	IN E-CONTENT		promote content	respect to its needs, challenges and
	DEVELOPMENT		generation, adaptation and	benefits
			distribution of e-content through electronic media	CO2: Explain the components of Authoring tools and E-learning standards  CO3: Apply Audio editing techniques for creating podcasts  CO4: Understand the techniques of creating customized lessons  CO5: Create videos using online tools
19J6CC13	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



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				of a Python program
19J6CC14	COMPUTER NETWORKS	Global	This course helps to know about the layered architecture of different models and also the works of each layer with security features.	CO4: Write programs to demonstrate loops and decision statements in Python  CO5: Build and package in Python modules for reusability  CO 1: Outline the functionalities of



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		Global	This course helps to get	CO1: Identify different Python object
19J6CC15	LAB IN PYTHON		practical knowledge in python language and to know about the different types of data like lists, dictionaries and files handling	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
19J6ME3	SECURITY PRACTICES	Global	This Course helps in examining the security issues and practices along with the encryption techniques	CO1: Understand the concept of cryptography  CO2: Compare on the encryption techniques available  CO3: Evaluate the Various tools and tactics followed in military



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				CO4: Predict the forensics fundamentals and the various technologies used to avoid
				computer crimes.  CO5: Illustrate different methods to collect and preserve digital evidence and Digital Crime Scene
19J6ME4	DATA MINING	Global	To discover the hidden patterns in the rapidly growing data generated by businesses, science, web, and other sources and to focus on the key tasks of data mining.	algorithms, methods, and tools  CO2: Identify business applications of data mining  CO3: Predict quantitative analysis report to make decisions



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		Global	This helps to connect things to the internet which provide many advantages and also to	
19J6ME5	INTERNET OF THINGS (IoT)		understand the characteristics of IoT.	data CO4: Formulate real World IoT
				design Constraints and Industrial Automation in IoT CO5: Work with IoT
19J6ME6	HUMAN COMPUTER INTERACTION	Global	The main purpose is to provide the most fundamental knowledge about Artificial Intelligence, Fuzzy Logic and Virtual Reality.	amenable to solution by AI methods



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19J6SB5	SKILL BASED - V LAB IN PHP	Global	To be familiar with the structured approach by identifying the needs, interests and functionalities that helps in creating dynamic websites	effects and impact of VR  CO5: Apply the VR technology in different applications  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



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#### NAME OF THE PROGRAMME: PG Diploma in Computer Applications

#### **Programme Outcomes (POs)**

PO 1	To learn the latest trends in various subjects of computers applications.					
PO 2	To learn computer applications in different fields like banking, insurance, software industry, govt & Corporate sectors.					
РО З	To provides specialisation in computer science with technical, professional and communications skills. It also trains students to become future IT professionals.					
PO 4	To design, implement and evaluate a computer-based system, process, component, or programme.					
PO 5	To Design and develop applications to analyze and solve all computer related problems.					

#### **Programme Specific Outcomes (PSOs)**

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PSO 2	To the ability to employ modern computer languages and graphics editor for their successful career, to create platforms to become an entrepreneur and a relish for higher studies.
PSO 3	To train themselves professionally in the areas of programming, multimedia, animation, web designing, and networking and to acquire knowledge in various domains-based electives.
PS0 4	To generate ideas of innovation and to identify, formulate and solve problems in software solutions, outsourcing services, public and private sectors
PSO 5	To equip the students to meet the requirement of corporate world and Industry standards

#### **Course Outcomes (COs)**

Course Code	Course Title	Nature of the Course (Local/National/ Regional/Global)	Cou	ırse De	scriptio	on	Cours	se Outcomes
19PDB101	COMPUTER	Global	То	Study	about	the	CO1:	Outline the structure of OS,



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	FUNDAMENTA		concepts, stru	ıcture	basic architectural components
	LS		and mechanism	ns of	CO2: Analyze on the different
			operating system	ns. To	scheduling algorithms and critical
			examine	the	section problems
			operations	of	
			processes	and	CO3: Critique device and resource
			threads, sched	uling,	management techniques by
			deadlock, me	emory	concentrating on deadlocks
			management an	id file	CO4: Identify and know about
			systems		memory management techniques
					CO5: Interpret the mechanisms
					adopted for file sharing in
					distributed Applications
	PROBLEM		To develop programming C		CO1: Acquire basic understanding of C Programming
19PDB102	SOLVING	Global	programming lar	_	CO2: Illustrate how arrays and
	USING C		simple to mode problems.		strings are implemented in C



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				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
				CO1: Acquire basic understanding
			To provide the	of Web designing
			student with	CO2: Writing valid and concise code
			foundational	for web pages
19PDB103	WEB DESIGNING	Global	programming knowled ge and skills for application	CO3: Utilize the knowledge of web creation
			development on	CO4: Analyze the validations for
			the Internet	website
				CO5: Outline the file operations



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19PDB104	LAB –I PROGRAMMIN G IN C	Global	To develop programs using C programming langua ge, in order to solve simple to moderate problems.	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
19PDB105	LAB –II WEB PROGRAMMIN G	Global	To provide the student with foundational programming knowledge and skills for application development on the	of Web designing  CO2: Writing valid and concise code for web pages  CO3: Utilize the knowledge of web



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			Internet.	CO4: Analyze the validations for
			To create and design	website
			digital images and	CO5: Outline the file operations
			illustrations for print	
			and Web publication.	
				CO1: Analyze on the various tools of
				Photoshop
				CO2: Compare different types of
			This course gives knowledge on the	filters used in Photoshop
	LAB – III		editing of images and	CO3: Apply the techniques available
21PDB106	DESIGN TECHNIQUES	Global	created animated images.	in CorelDraw
				CO4: Create animated banners and
				various simple animations
				CO5: How to prepare and process
				photos for the Web?
19PDB201	DATABASE	Global	To inculcate	CO1: Critique SQL commands to



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	MANAGEMENT		knowledge	on	create tables and indexes
	SYSTEM		RDBMS and Prowith SQL.	concepts	CO2: Apply DDL and DML commands in real time applications  CO3: Understand the needs of triggering applications  CO4: Disseminate knowledge of RDBMS and SQL, both in terms of design and implementation usage  CO5: Write dynamic queries to demonstrate the concepts of RDBMS
21PDB202	PYTHON PROGRAMMIN G	Global	students tunderstand	o get better ding in the acept and to c knowledge	CO2: Identify Python object types.



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			using Pytho	or Programs.
			Programming.	CO4: Acquire how to design and program Python applications.
				CO5: Outline the file operations in Python.
				CO1: Critique SQL commands to create tables and indexes
19PDB203	LAB –IV RDBMS	Global	To inculcate knowledge on RDBMS concepts and Programming with SQL	CO3: Understand the needs of triggering applications
				CO5: Write dynamic queries to demonstrate the concepts of



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				RDBMS
19PDB204	LAB –V PYTHON PROGRAMMIN G	Global	To Learn to design and develop Windows-Based Business Application using VB program that meet commercial program standard.	CO1: Assess why Python is a useful scripting language for developers.  CO2: Identify Python object types.  CO3: Illustrate the usage of Lists, tuples, and Dictionaries in Python Programs.  CO4: Acquire how to design and program Python applications.  CO5: Outline the file operations in Python