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Affiliated to Madurai Kamaraj University

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

Mary Land, Madurai - 625018, Tamil Nadu

AQAR - QUALITATIVE METRIC

2022 - 2023

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: BCA

Programme Outcomes:

	Understand, analyze and apply the concepts of latest technologies to bring solutions to the
PO 1	problems in the areas of computer applications.
	Analyze and synthesize computing systems through quantitative and qualitative techniques along
PO 2	with effective verbal and non-verbal communication.
	Apply technical and professional skills practically to excel in providing solutions for solving
PO 3	complex real life problems satisfying industrial and societal needs.
	Understand & analyze the technical data through innovative methodologies with legal ethics to
PO 4	reach out actionable conclusions.



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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



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	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 Outcomes:

Course Code Course Title	Nature of the Course (Local/Natio nal/Regional /Global)	Course Description	Course Outcomes
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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.	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	CO1: Acquire basic understanding of C



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			implementation of	programming
			structured	CO2:Illustrate how arrays
			programming using	and strings are
			control structures,	implemented in C
			data structures and functions along with basic problem solving techniques.	CO3:Utilize the knowledge of Functions and Pointers
			This course	
21J1NME	NON MAJOR ELECTIVE – I ANIMATION TOOLS AND TECHNIQUES	Global	helps to become familiar with the elements and tools in Alice that is used	methods and events CO2: Design, create and edit animation scenes



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	to create interactive and interactive
	animated media movies
	such as scene CO3: Utilize event handling
	creation and movie methods and properties
	making. CO4: Demonstrate story
	boards and animation movies
	CO5: Utilize and
	understand different sounds
	and sound formats ir
	alice
	To get better CO1:Assess the object -
	understanding in oriented concepts in C++
OBJECT ORIENTED	the OOPS Concept CO2:Illustrate the usage o
19J2CC3 PROGRAMMING Global	and to have basic Functions in C++
IN C++	knowledge in
	writing programs CO3:Analyze advanced
	features of C++



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			Programming	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 Programming in C++ and write code in all aspects of C++ Language	programs written in C++ language CO2:Demonstrate class and object functions



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				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



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				deadlocks
				CO4:Identify and know about
				memory management techniques CO5:Interpret the mechanisms adopted for file sharing in distributed
			m 1	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



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				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
				CO 1:Understand the basic
			This course	
	PRINCIPLES OF		provides the	creation in tally
	FINANCIAL		accounting	CO 2: It tells how to work with
19AC3ACJ3	ACCOUNTING AND		language's	Journals, Ledgers and Cash
	ACCOUNTING		essentials that	Flow Statements.
	PACKAGE	Global	helps to read and	
		Global	interpret financial	CO 3: It is the language that
			statements for	managers use to communicate



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			business	diagnosis	with the terms of accounting.
			and	decision-	CO 4:The firm's financial and
			making.		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
			То	improve	CO1: Apply quantitative
			aptitude,	problem	techniques to solve variety of
	SKILL BASED – I LOGICAL 19J3SB1 REASONING AND	National	solving s	kills and	problems.
19J3SB1			reasoning	ability	CO2: Perform statistical
	DATA INTERPRETATIO		that helps	s to focus	analysis to interpret
	N N		on their	r career	information.
			developme	ent	CO3Apply the aptitude tricks,



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			, 	1 , , 1 C 1
				shortcuts and formulas
				CO4: Acquire clear
				understanding on easily
				solving the reasoning.
				CO 5:Focuses in clearing the
				competitive, Campus and
				entrance online tests
		Global	To give better	CO1: Assess the concept of
			understanding	various data structures and
			of how	the logic behind their
	DATA		algorithms are	workings CO2: Compare
10 14 007	19J4CC7 STRUCTURES AND ALGORITHMS		developed along	various ADT
1904007			their	CO3: Utilize trees and graphs
ALGORITHWS		appropriate data	in real time application	
			structures	CO4: Compare the various
			which have both	Directed and Undirected
			historical and	Graphs.



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		contemporary significance	CO5: Analyze case studies to
		significance	
		Significance	implement and comment
			about performance of
			algorithms.
19J4CC8 LAB IN WEB PROGRAMMING	Global	To provide the student with foundational programming knowledge and skills for application development on the Internet.	presenting information in web pages. CO2:Design and implement dynamic websites with good aesthetic sense of designing.



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				CO4:Prepare the students to write a well formed DB connection CO5:Create WebPages for any application using database connectivity
19P4ACJ4	DIGITAL PRINCIPLES AND COMPUTER ORGANIZATION	Global		CO3: Demonstrate and perform computer arithmetic operations on integer and real



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				basics of organizational and
				architectural issues of a
				digital computer with logics
				CO1:Customize the Ribbons of
			To enable the	Spreadsheets
			students in crafting	CO2:Perform statistical
			professional excel spread sheets and	analysis using charts
	SKILL BASED – II DATA ANALYSIS		to familiarize the	CO3: Apply the aptitude triols
19J4SB2	USING		students in	shortcuts and formulas
	SPREADSHEETS	Global	preparation of	CO4 Compare all the
		Glosar	analysis in data and	functions available
			presentations with	CO5:Focuses on the
			automation tools.	protection of data in
			spreadsheets	
19J5CC9	SOFTWARE	Global	Aims to	CO1: Compare the various
1903009	ENGINEERING	S.23 & W.	provide a thorough	software models.



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			knowledge about	CO2: Use knowledge,
			various phases	techniques, skills and modern
			involved insoftware	tools necessary for software
			development along	engineering practice
			with the testing techniques.	CO3: Analyze on the design factors and guidelines
				CO4: Understand the
				different types of testing used
				in softwares
				CO5: Understand the various
				types of Testing tools
			To acquire	CO1:Acquire in depth
			knowledge on	knowledge in Java
19J5CC10 JAVA PROGRA	JAVA	Global	Object Oriented	programming concepts
	PROGRAMMING		Programming using	
			Multithreading,	CO2:Identify and analyze
			Exceptions, GUI &	platform independent



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			database	environment and byte
			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
19J5CC11	LAB IN JAVA PROGRAMMING	Global	To acquire practical knowledge on Object Oriented Programming using Multithreading, Exceptions, GUI & database	CO1:Acquire in depth knowledge in Java programming concepts CO2:Identify and analyze platform independent environment and byte



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			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
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



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				WebPages through case studies
				CO4:Use the different types of master page creation CO5:Create different dynamic websites for applications
19J5ME1	CLOUD COMPUTIN G	Global	To learn the basic knowledge of structured programming in C control structures, data structures and functions along with basic problem solving techniques.	computing solutions CO2: Outline Cloud service and deployment models CO3: Identify the architecture and infrastructure of



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		<u> </u>	<u> </u>	
				cloud and community
				CO4: Predict security issues and formulate recovery mechanisms CO5: Understand the concept of virtualization
19J5ME2	MOBILE COMPUTIN G	Global	To be acquainted with the Mobile Application Development Platform and its Architectures, GSM, GPRS, Applications	systems CO2: Assess the characteristics of



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				science by using
				appropriateresearch
				methodologies
				CO4: Analyze on the various
				software kits available
				CO5: Assess the
				characteristics of Mobile
				Components and Applications
				CO1: Analyze on the various
			This course	tools of Photoshop
	SKILL BASED –		gives knowledge on	CO2: Compare different types
	III		the editing of	
19J5SB3	LAB IN	Global	images and created	Photoshop
1300020	ANIMATION TECHNIQU		animated images.	CO3: Apply the techniques
	ES			available in CorelDraw
				CO4: Understand the Open



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				Source techniques in editing
				CO5: Create animated banners and various simple animations
19J5SB4	SKILL BASED – IV LAB IN E – CONTENT DEVELOPMENT	Global	This course helps to promote content generation, adaptation and distribution of e-content through electronic media	of Authoring tools and E-learning standards CO3: Apply Audio editing



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				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	access data in Python programs CO3:Assess structure and components of a Python



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 			023010, Tariii Hada	
				Python modules for reusability
19J6CC14	COMPUTER NETWORKS	Global	different models and also the works	unguided media and its real time usage and applications



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				CO1:Identify different Python object types
19J6CC15	LAB IN PYTHON	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	CO2:Discuss how to use indexing and slicing to access data in Python programs
19J6ME3	SECURITY PRACTICES	Global	This Course	CO1: Understand the concept



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			helps in examining	of cryptography
			the security issues	CO2: Compare on the
			and practices along	-
			with the encryption	
			techniques.	CO3: Evaluate the Various tools and tactics followed
				in military 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	



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			the rapidly growing	tools
			data generated by	CO2:Identify business
			businesses, science,	applications of data
			web, and other	mining
			sources and to focus on the key	CO3:Predict quantitative
			tasks of data	analysis report to make
			mining.	decisions
			8	CO4:Outline the developing
				areas web mining, text
				mining, and ethical
				aspects of data mining
				CO5: Compare the various
				applications of Data Mining
			This helps to	CO1: Design IOT based
19J6ME5	INTERNET OF THINGS (IoT)	Global	connect things to the internet which	Prototypes
			provide many	CO2: Evolain how sensors



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			advantages and also	and embedded systems
			to understand the	work
			characteristics of IoT.	CO3: Analyze and visualize sensor 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	CO1: Identify problems that are amenable to solution by AI methods CO2: Formulate search problems and implement search algorithms using admissible heuristics



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			and	Virtual	CO3: Analyze on the basics
			Reality.		and architecture of VR systems
					CO4: Identify the human factors, effects and impact of VR CO5: Apply the VR technology in different applications
19J6SB5	SKILL BASED – V LAB IN PHP	Global	To be with the strapproach identifying needs, interfunctionalitithelps in dynamic we	by the tests and tes that creating	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



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			<u> </u>	
				CO4: Create dynamic web pages CO5: Design websites for various applications
19J6SB6	SKILL BASED – VI LAB IN LINUX	Global	This course gives basic knowledge on Linux operating system and to execute the code written in other languages.	CO2:Utilize Linux system to accomplish typical personal, office, technical, and softwaredevelopment



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		structures	with
		appropriate security	
		CO5: Formulate shell s	scripts
		to perform more co	mplex
		tasks	

Name of the Programme: PGDCA

Programme Outcomes:

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 3	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.



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Programme Specific Outcomes:

PSO 1	To expose the students to open source technologies so that they become familiar with it and can seek appropriate opportunity in trade and industry
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.
PSO 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:

e Title Nature of the Course Course Outcom	nes
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Code		Course (Local/Nation	Description	
		al/Regional/G lobal)		
				CO1: Understand the
			To Study about the	
		Global	concepts, structure	
			and mechanisms of	CO2: Explain the basic
			operating systems.	
			To examine the	storage.
19PDB101	Computer		operations of	CO3: Understand the
	Fundamentals		processes and	computer software and
			threads,	languages.
			scheduling,	CO4: Understand the
			deadlock, memory	components of network
			management and	and its architecture.
			file systems.	CO5: Outline the cloud
				services and



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		<u> </u>		
				infrastructure.
				CO1: Understand the
		Global	To develop	basic concepts in C
	Problem solving using C		programs using C	CO2: Explain the
			programming langu	functionalities of arrays
19PDB102			age, in order to	
			solve simple to	and strings
				CO3: Understand the
			moderate problems	usage and
				implementations of



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				functions
				CO4: Understand the
				basic concepts of
				functions
				CO5: Outline the
				concept of structure
				and pointer
			To provide the	CO1: Understand the
			student with	basic concepts in HTML
			foundational	CO2: Explain the Text
				formatting & Tables
19PDB103	Web Designing	Global	edge and skills for	CO3: Understand the
19100103	web Designing	web Designing	application	usage and
			development on	implementations of
			the Internet.	Graphics and frames
				_
				CO4: Understand the



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				Script in PHP
				CO5: Outline the
				database connectivity
19PDB104	Lab –I Programming in C	Global	To learn the practical implementation of structured programming using control structures, data structures and	
			functions along with basic problem solving techniques	CO4: Understand the functions CO5: Outline the concept of structure
19PDB105	Lab –II Web	Global	To provide the	CO1: Understand the



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	Programming		student with	Webpage creation
			foundational	CO2: Explain the tables
			programming knowl	and frames
			edge and skills for application development on	CO3: Understand the Stylesheets
			the Internet.	CO4: Understand the Database creation
				CO5: Outline the Connectivity with database
19PDB106	Lab –III Design Techniques	Global	This course gives knowledge on the editing of images and created animated images.	various tools of



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				CO3: Apply the techniques available in CorelDraw CO4: Create animated banners and various simple animations CO5: How to prepare and process photos for the Web.
19PDB201	Database Management System	Global	To inculcate knowledge on RDBMS concepts and Programming with SQL	CO2: Apply DDL and



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				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
			To enable the	CO1: Assess why
			students to get	Puthon is a useful
			better	scripting language for
			understanding in	developers.
21PDB202	21PDB202 Python Global	Global	the OOPS Concept	CO2: Identify Python
			and to have basic	object types.
			knowledge in	CO3: Illustrate the
		writing programs	usage of Lists, tuples,	



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				using	Python	and	Dictiona	ries	in	
				Programmin	ng.	Pythor	n Program	ıs.		
						design Pythor CO5:	Acquire and applicate Outline operations	prograions.	am	
19PDB2	03	Lab –IV RDBMS	Global	work with o	and to	commatables CO2: DML of time a	Critique ands to and index Apply Decommand pplication Understate of the control o	cre xes DL a s in r	and real the	



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		iviary Laria, ividual at 0230	20) 141111111444	
				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
				CO1: Assess why
			Analyze program	Python is a useful
	Lab –V Python Programming		requirements.	scripting language for
			Design/develop	developers.
21PDB204		Global	programs with GUI	CO2: Identify Python
			interfaces.	object types.
				CO3: Illustrate the
				usage of Lists, tuples,



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	and Dictionaries in
	Python Programs.
	CO4: Acquire how to
	design and program
	Python applications.
	CO5: Outline the file
	operations in Python.