KCES's Institute of Management and Research, Jalgaon
BCA (2022-23)

Course	Semister	Subject Code	CO's
BCA-I	SEM-I	BCA101 Fundamentals of Accounting	CO1: To study the fundamental Accounting concepts, terms, jargons.
			CO2: learn the process of recording of financial transactions in the books of Accounts.
			CO3:To develop the foundation for higher studies in the field of accounting.
		BCA-102 Fundamental of Computer	CO1: Student will learn the basics of computer system, number system.
			CO2- Student will learn the different input, output devices and memory concepts.
			CO3-Student will learn to design flowchart & Algorithms.
			CO4-Student will learn the functions of operating system and their types.
			CO5-Student will learn the different transmission media's in networking and Internet applications.
			CO6-Student will learn the Switching techniques as well as different topologies.
		BCA-103 Programming in C– I	CO1: A general understanding of Compilation.
			CO2:Get the concepts of the actual roles of the lexical & syntax analyzer.
			CO3:An understanding of Intermediate Code Generation.
			CO4:Get the knowledge of Code Optimization.
			CO5: An understanding of Symbol Table organization.
		BCA-104 Web Design – I	CO1: Students will be able to use the HTML programming language and apply fundamental principles of web design theory and practice
			CO2: Students will be able to understand the Internet architecture, the fundamental principles of Internet communication.
			CO3: Students will develop skills in analysing the usability of a web site. Introduce basics concept of CSS.
			CO4: Students will be able to use a variety of strategies and tools to create websites and will understand the new features of HTML 5 and their uses .
			CO5: Build structured HTML pages with text, links, images, tables and forms Use style sheets (CSS) for colours, background, formatting text, page layout and simple transition, transformation.
		BCA201 Professional	CO1:To develop his verbal and nonverbal communication ability
			CO2: To communicate with people effectively and confidently.

		Communication Skill	CO3: To draft effective business correspondence documents.
			CO4: To make and present well designed and informative presentations
	SEM-II	BCA-202 Database Management System	1. Understand the basic concepts and the applications of database systems.
			2. Master the basics of SQL and construct queries using SQL.
			3. Understand the relational database design principles.
			4. Familiar with the basic issues of transaction processing and concurrency control.
			5. Familiar with database storage structures and access techniques.
		BCA-203 Programming in C– II	1. At the end of the course, student will be able to: 1. Apply the concepts of Function modules, its usage
			2. Apply the concepts of memory allocation using Pointers
			3. Understand the concepts of structures and unions: declaration, initialization and implementation.
		BCA-204 Web Design - II	1. Understand, analyze and create web pages using HTML, DHTML and Cascading Styles Sheets.
			2. Understand, analyze and build dynamic web pages using JavaScript and VB Script (client side programming).
			3.Understand, analyze and build interactive web applications.
	SEM-III	BCA-301 Fundamental Mathematics and Statistics	CO1: Understanding of all terms related to mathematical logic.
			CO2:Ability to know the types of sets, method of representation, operations and laws related to it.
			CO3: Ability to solve problem related to matrices.
			CO4:Understand the basic concepts of Statistics.
			CO5:Analyse statistical data using measures of central tendency.
			CO6:Performing mathematical and statistical function using MS-Excel.
		BCA-302 Operating System	CO1. To get aware of the main components, computer organization interface, and system calls of OS.
			CO2.Ability to apply process management and threading
			CO3To Make understand the features of Linux, To Learn the basic Linux command
		BCA-303 Programming in C++	1. To understand OOPs Cocept
			2. To understand the concept to implements Functions, Pointer Array in C++
			3. To understand to implements Class, Object, Inheritance and polymorphism
			4. To understand the concepts of Exception handling and File management
			1. Understanding the Role of data Analyst.

BCA-II			BCA-304 B)Data Analytics – I	2. Understanding the basic concept of data management and data mining techniques.
				3. To understand the basic concept of machine learning
				4. To understand the application of business analysis.
				5. Understanding the basic concept of Advanced Excel.
			BCA-304 C)Python Programming	CO1. Interpret the fundamental Python syntax and semantics and be fluent in the use of Python control flow statements.
				CO2. Express proficiency in the handling of strings and functions.
				CO3. Determine the methods to create and manipulate Python programs by utilizing the data structures like lists, dictionaries, tuples and sets.
				CO4. Identify the commonly used operations involving file systems and regular expressions
	SEM-IV		BCA-401 Software Engineering	1. Students will be able to decompose the given project in various phases of a lifecycle.
				2. Students will be able to choose appropriate process model depending on the user requirements.
				3.Students will be able perform various life cycle activities like Analysis, Design, Implementation, Testing and Maintenance.
				4. Students will be able to know various processes used in all the phases of the product.
				5. Students can apply the knowledge, techniques, and skills in the development of a software product.
			BCA 402 Data Structure	1.To understand the Meaning of Data, item, Elementary and Group Data item Meaning of Algorithm, Algorithm development.
				2. To understand what is Array, Dimension of array and perform in arithmetic operations. Also learn sorting techniques (Bubble Sort, Selection Sort, Insertion Sort, Quick Sort and Merge Sort) and Searching techniques (Linear Search, Binary Search).
				3. To understand what is the Stack and implementing Stack Operation & Queue, Queue Operation.
				4. To understand the Linked Lists singly link list, Circular Link List and Doubly Link List.
				5. Tree, Binary tree Graph: - to understand Types, representation in memory.
			BCA 403 Java Programming	1] Gain understanding of Object oriented programming concepts using Java
				2] Knowledge of input, its processing and getting suitable output
				3] Students get a practical exposure to go about these concepts which help improvise their skills
				4] Students Acquire Knowledge about the concepts of GUI controls and designing GUI applications
				1. Gain a historical perspective of AI and its foundations.
				2. Study the concept of Artificial Intelligence.

		BCA 404 (C) Artificial Intelligence	3. Investigate applications of AI techniques in intelligent agents
			4. Learn the methods of solving problems using Artificial Intelligence.
			5. Learn various peculiar serch strategies for AI.
		BCA 404 (B) Data Analytics-II	1) To introduce the software R and how to write elementary programs
			2) To demonstrate how statistical models are implemented and applied.
			3) To import, manage and structure data files.
			4) To write simple program scripts for data analysis produce illustrative data plots and carryout statistical tests.
BCA-III	SEM-V	BCA 501 - Entrepreneurship Developmen	1. Opportunity to sharpen entrepreneurial competencies
			2.Project selection criteria
			3. Clarity about the business idea
		BCA 502 - Cyber Security	1. Understanding the basic concepts of Cyber Security.
			2. Gain Basic Programming Knowledge for Cyber Security
			3. Understand the various attacks in web interface.
			4. Understand the level of security in operating systems.
			5. Know the concepts of Network Security.
		BCA 503 - ASP.NET Technology	C01:Understand the Microsoft .NET Framework and ASP.NET page structure.
			CO2: Create a Web form with server controls.
			CO3: Separate page code from content by using code-behind pages, page controls, and components.
			CO4: Display dynamic data from a data source by using Microsoft ADO.NET and data binding.
			CO5:Access the data using inbuilt data access tools.
		BCA 504 - Software Engineering	1. Students will be able to decompose the given project in various phases of a lifecycle.
			2. Students will be able to choose appropriate process model depending on the user requirements.
			3.Students will be able perform various life cycle activities like Analysis, Design, Implementation, Testing and Maintenance.
			4. Students will be able to know various processes used in all the phases of the product.
			5. Students can apply the knowledge, techniques, and skills in the development of a software product.
			1. To impart to the learner sound knowledge in the fields of IT, Commerce, Management, Finance, Economics
			2. To introduce the students to various aspects of e-commerce applied in business.

BCA-III	SEM VI	BCA 601 - e-Commerce & m -Commerce	3. To integrate professional skills in their learning through hands on experience so as to enhance the scope of employment and entrepreneurship.
			4. To equip students and keep them updated on the changes and emerging trends in e- Commerce.
			5. To give insights and specific learning for building confidence towards venturing into startups and emerge successful.
		BCA 602 - Cloud Computing	1. Demonstrate an understanding of cloud computing fundamentals, including key concepts such as virtualization, scalability, and elasticity.
			2. Evaluate different cloud architectures and select appropriate solutions based on specific business requirements and constraints.
			3. Utilize a variety of cloud services, such as Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS), to address diverse computing needs.
			4.Design and implement cloud deployment strategies, incorporating best practices for security, performance optimization, and cost management.
		BCA 603 - Android Application Development	1. To learn about the basic and design of mobile applications and android platform and its architecture.
			2. To learn activity creation and Android UI designing.
			3. To be familiarized with database issue and server in Android Application Development.
		BCA 604 - Server Side Scripting using PHP	1) Introduce you to all the key concepts of the PHP language,as well as a full coverage of the php Syntax
			2) Understand what is PHP & its programming structure.
			3) Introduce the concept of object-oriented programming (OOP) in PHP, including classes, objects, properties, and methods
			4) How to use a session cookie to store data on the server instead of in the browser