Course Outcomes

BCA

1st Year

BCA-101 COMMUNICATIVE ENGLISH

Name of the Program	Course Code	Name of the Course	Course Outcomes
BCA	**BCA-101**	**COMMUNICATIVE ENGLISH**	After completion of this course, the students will be able to • The students develop effective oral and written communication skills and express their ideas clearly and confidently in both formal and informal conversational settings. • The students identify instances of miscommunication and apply strategies for recognizing and overcoming barriers in communication to enhance clarity and effectiveness in their message. • The students develop an understanding of verbal and verbal communication across various contexts. • The course foster interest in the students and prepares them for meaningful conversations, discussions, and debates on a wide range of topics. • It Improves written communication skills of the participants, including the ability to compose clear, concise, and well-structured Cover letter, Job applications, business letters, emails, reports, CV, Resume, and paragraphs. • The course helps the students build their vocabulary and enrich them with a good number of

			Idioms and phrases, and hence make them comfortable in their spoken and written communication. • The course also prepares the participants for job interviews, public speaking, Presentation, etc • The students are familiarised with real-world communication, such as job interviews, public speaking, and customer service scenarios, so that they can easily adjust themselves in different work cultures. • The course also enables the students to recognize, develop, and manage positive attitudes, navigate negative attitudes, and appreciate the impact of attitudes on personal, professional, and societal interactions. • The life stories of Indian business leaders inspire and motivate the students and help them develop never give-up attitudes.

Course Outcomes

BCA-102 BASIC MATHEMATICS

Name of the Program	CourseCode	Name of the Course	Course Outcomes
BCA	**BCA-102**	**BASIC MATHEMATICS**	After completion of this course • Students will be able to know and understand the fundamental mathematical concepts, including Logic, Algebra, Calculus, and Geometry. • Students will be able to understand basic logical operators and apply their use in Computer Science and Programming. • Students will be able to apply mathematical principles to solve a variety of real-world problems, including those related to Computer Science and Programming. • Students will be able to distinguish between a relation and function and the various types of functions and relations. • Students will be proficient in algebraic operations, including solving linear and quadratic equations. • Students will be able to simplify expressions, and understand mathematical symbols and notation. • Students will become familiar with the basic concepts of calculus, including limits, derivatives, and integrals, and understand their applications in computer science and data analysis. • Students will be able to apply the concepts of differentiation and Integration in real life and areas of Computer Science.

			• Students will be able to make use of multiple integrals to find area, volume and length of various structures. • Students will have a good grasp of two dimensional geometry and trigonometry concepts, which are important for computer graphics and game development.

Course Outcomes

BCA-103/ INFORMATION TECHNOLOGY AND APPLICATION

Name of the Program	CourseCode	Name of the Course	Course Outcomes
BCA	**BCA-103**	**INFORMATION TECHNOLOGY AND APPLICATION**	After completion of this course • Students will gain knowledge about the evolution, different generations, significant characteristics of computers and their growth in terms of technological advancement. • Students will be able to classify computers based on their capabilities and applications, allowing them to understand the various types of computers available today. • Students will be able to identify and describe the key components and functions of a computer system, including hardware, software, input and output devices. • Students will comprehend different types of memory (RAM and ROM) and various storage devices (e.g., magnetic disks, optical disks) and their roles in computing. • Students will understand the relationship between hardware and software, differentiate between system software and application software, and gain knowledge of algorithms, flowcharts, and programming concepts. • Students will be able to describe the history and evolution of operating systems, including Microsoft DOS, Linux, and Windows, and explain the functions of operating systems. • Students will learn various elements of data communication,

			computer networking concepts, transmission media, and the basics of internet services, security, and protocols. • Students will be proficient in using Microsoft Office applications such as MS-Word, MSExcel, and MS-PowerPoint for various document creation, data analysis, and presentation purposes.

Course Outcomes

BCA-104 PRINCIPLES OF MANAGEMENT & ORGANIZATION

Name of the Program	Course Code	Name of the Course	Course Outcomes
BCA	**BCA-104**	**PRINCIPLES OF MANAGEMENT & ORGANIZATION**	After completion of this course • Students will be able to develop comprehensive understanding about the principles and practices of management across the world. • Students will be able to learn how with time the various management concepts and principles have evolved over time. • Students will be able to understand how human and non human resources combined are important for efficient management. • Students will be able to understand the effect of hierarchy, command & control in an organization. • Students will be able to understand application of various concepts of management in different situations. • Students will be able to know how coordination of managerial and executive is responsible for effective & efficient management

Course Outcomes

BCA-105: Python Programming (Elective 1)

Name of the Program	CourseCode	Name of theCourse	Course Outcomes
BCA	**BCA-105**	**Python Programming (Elective 1)**	After completion of this course the students will be able • Students will be able to recall Python syntax rules and basic programming concepts. • Students will be able to list and define commonly used Python data types, such as integers, strings and lists. • Students will be able to explain the purpose of variables, data types, and control structures in Python. • Students will be able to describe the principles of object-oriented programming (OOP) and how they apply in Python. • Students will be able to write Python code to solve simple programming problems, such as calculating mathematical expressions or processing strings. • Students will be able to develop Python programs that use conditional statements and loops to control program flow. • Students will be able to analyze and debug Python code to identify and fix syntax and logic errors. • Students will be able to break down complex programming problems into smaller, manageable tasks and design Python solutions for them. • Students will be able to create

			Python functions and classes to encapsulate code for reuse and modularity. • 1Students will be able to design and develop Python applications to address specific real world tasks or challenges. • Students will be able to create Python functions and classes to encapsulate code for reuse and modularity. • Students will be able to design and develop Python applications to address specific real world tasks or challenges.

Course Outcomes

BCA-106: PROBLEM SOLVING AND PROGRAMMING CONCEPTS

(Elective 2)

Name of the Program	CourseCode	Name of theCourse	Course Outcomes
BCA	**BCA-106**	**PROBLEM SOLVING AND PROGRAMMING CONCEPTS** **(Elective 2)**	After completion of this course the students will be able to • Students will learn basic concepts of programming. They will be getting familiar with concepts of data types, variables and operators. • Students will learn the concepts of control structure like branching and jumping. Students will be able to solve problems involving decision making by using if statement, if else and if else if else statements. • Students will learn looping control structure and with that they will be able to execute instructions repeatedly. Students will be solving problems using loops like while, for and do while loop. • Students will be exposed to complex data storage mechanism like array. Students will learn to declare and use one and multi-dimensional arrays. They will be able solve problems like matrix manipulation,

			multi string handling etc. • Students will learn the methods of declaring and using user defined functions. They will also learn how to pass parameters to function and receive output. Complex concepts like recursion will be learnt by the students. • Integration of primitive data types to create complex user defined data type will be learnt by the students. This will used in solving real life complex programming problems. Students will be able to pass objects of structure and union to functions and get them returned by the function as well. • Students will learn the concept of pointer. Pointers will help the students control the variable indirectly. Students will be passing parameters through pointer. This will also help them in returning values from function. • Data storage methods will be familiarized by the students. They will be able to open and close files. They will also be performing read and write operations on the files. • Concepts of command line arguments will be learnt and practiced by the students. This will

			enable them to run their program directly from the command prompt.

Course Outcomes

BCA 201 Business English

Name of the Program	CourseCode	Name of the Course	Course Outcomes
BCA	**BCA-201**	**Business English**	After completion of this course, students will be able to • The course helps the students build their vocabulary and enrich them with a good number of synonyms, antonyms, idioms and phrases, one-word substitution and hence make them comfortable in their spoken and written communication. • The course also prepares the participants to understand interpret and analyse visual information, which comes in terms of Table, Graphs and Charts. • The Course offers a text, which helps shape the participants for the challengers of the corporate world, and hence cope with the changes and adapt accordingly, and stay focused for always a better stake and position. • The course foster interest in the participants and prepares them for meaningful conversations, discussions, and debates on a wide range of topics. • It Improves written communication skills of the participants, including the ability to compose

			clear, concise, and well-structured Cover letter, Job applications, business letters, emails, reports, CV, Resume, and paragraphs. • The participants will learn how to conquer stage-fear, and deliver their presentations, engaging the audience into discussion and interaction. • The course also prepares the participants for job interviews, public speaking, Summary writing and proposal writing. • It also familiarises the participants identify the different types of composition, and helps develop their ideas in descriptive, narrative, argumentative and expository forms of composition • The course introduces the participants to different business letters, and make them efficient in letter writing. • The participants are familiarised with real-world communication, such as job interviews, public speaking, and customer service scenarios, so that they can easily adjust themselves in different work cultures.

Course Outcomes

BCA-202 MATHEMATICS [NUMERICAL TECHNIQUES]

Name of the Program	CourseCode	Name of theCourse	Course Outcomes
BCA	**BCA-202**	**MATHEMATICS [NUMERICAL TECHNIQUES]**	After completing the Business Organization & Environment course in BBA(IB); Semester II, students will able to • Students will learn basic concepts of finite representation of infinite number in computer system. • Student will learn the different types of error and their applications in the computer system. • Students will learn the concepts of root findings using different techniques so that they should know how computer solves polynomial equations. • Student will be able to solve integration and differentiation equations in computer students using interpolations. • Student will learn to solve the curve fitting problems using interpolation using different techniques like Newton's forward and backward difference methods. • Student will be able to solve linear equations using different techniques like gauss elimination, Jordon's methods etc. • Students will be able to solve integration using computational algorithm. • Students will be able to find area under curve without using integration using Trapezoidal and Simpson's algorithm. • Students will be able to solve differential equation of degree n using Eulers methods. • Students will be able to solve the differential equations using RK methods of order

Course Outcomes

BCA-203 SYSTEM ANALYSIS & DESIGN

Name of the Program	CourseCode	Name of theCourse	Course Outcomes
BCA	**BCA-203**	**SYSTEM ANALYSIS & DESIGN**	After completion of this course, the students will be able to, • Student will be able to 9Define and use common System Analysis and Design fundamental terminology. • Student will be able to utilize current Analysis and Design tools to graphically characterize processes and flows in a business system. • Students will be able to Design and create effective Input/ Output including Web pages/forms. • Students will understand the concept behind the designing of Logical Databases. • Students will demonstrate the technical and communication skills required for developing a Systems Proposal. • Students will be able to understand the role of systems in organization. • Students will be able to understand the role of system analyst and in software developments. • Students will develop logical structure of system using different modeling techniques. • Students will be able to define different test procedure for software testing. • Students will be able to know the concept behind different case tools that can be used to develop software.

Course Outcomes

BCA-204 PROBLEM SOLVING TECHNIQUE & PROGRAMMING IN C

Name of the Program	CourseCode	Name of theCourse	Course Outcomes
BCA	**BCA-204**	**PROBLEM SOLVING TECHNIQUE & PROGRAMMING IN C**	After completion of this course, the students will be able to, • Students will learn basic concepts of programming. They will be getting familiar with concepts of data types, variables and operators. • Students will learn the concepts of control structure like branching and jumping. Students will be able to solve problems involving decision making by using if statement, if else and if else if else statements. • Students will learn looping control structure and with that they will be able to execute instructions repeatedly. Students will be solving problems using loops like while, for and do while loop. • Students will be exposed to complex data storage mechanism like array. Students will learn to declare and use one and multi-dimensional arrays. They will be able solve problems like matrix manipulation, multi string handling etc. • Students will learn the methods of declaring and using user defined functions. They will also learn how to pass parameters to function and receive output. Complex concepts like recursion will be learnt by the students. • Integration of primitive data types to create complex user defined data type will be learnt by the students. This will used in solving real life complex programming problems. Students will be able to pass objects of structure and union to functions and get them returned by the function as well.

			• Students will learn the concept of pointer. Pointers will help the students control the variable indirectly. Students will be passing parameters through pointer. This will also help them in returning values from function. • Data storage methods will be familiarized by the students. They will be able to open and close files. They will also be performing read and write operations on the files. • Concepts of command line arguments will be learnt and practiced by the students. This will enable them to run their program directly from the command prompt.

Course Outcomes

BCA-205 OPERATING SYSTEM & UNIX

Name of the Program	CourseCode	Name of the Course	Course Outcomes
BCA	**BCA-205**	**OPERATING SYSTEM & UNIX**	After completion of this course, the students will be able to, • Students will be able to understand how any operating system functions as a middle layer between the hardware of a computer and the user programs and the various tasks involved. • Students will be able to understand the different services provided by Operating System at different level. • Students will be able to learn real life applications of Operating System in every field. • Students will be able to control access to a computer and the files that may be shared. • Students will be able to demonstrate the knowledge of the components of computer and their respective roles in computing. • Students will be able to ability to recognize and resolve user problems with standard operating environments. • Students will be able to gain practical knowledge of how programming languages, operating systems, and architectures interact and how to use each effectively. • Students will be able to understand the use of different process scheduling algorithm and synchronization techniques to avoid deadlock. • Students will be able to learn different memory management techniques like paging, segmentation and demand paging etc. • Students will be able to understand the protection and security and also the Comparison of UNIX and Windows based OS.

Course Outcomes

BCA-301 OBJECT ORIENTED PROGRAMMING USING C++

Name of the Program	Course Code	Name of theCourse	Course Outcomes
BCA	**BCA-301**	**OBJECT ORIENTED PROGRAMMING USING C++**	After completion of this course, the students will be able to, • Students will be able to write simple C++ program for solving the given expression using Procedure Oriented Programming (POP) approach. • Students will be able to write POP based C++ program using decision making and loop structure for the given situation. • Students will be able to write POP based C++ program using arrays to solve the given problem. • Students will be able to develop relevant friend functions to solve the given problem. • Students will be able to write C++ program to create the given object using constructor. • Students will be able to write C++ program to delete the given object using destructor. • Students will be able to explain given type of inheritance based on its characteristics. • Students will be able to implement given type of inheritance in C++ program. • Students will be able to write C++ program using virtual base class. • 10. Students will be able to use constructor in the given derived class. • Students will be able to use function overloading to solve the given problem. • Students will be able to use operator overloading to solve the given problem. • Students will be able to implement run time polymorphism using

			virtual functions in the given C++ program. • Students will be able to identify relevant class for performing the given file operation. • Students will be able to write statement to open and close the given file in C++. • Students will be able to develop C++ program to perform read/write operation from/to the given file.

Course Outcomes

2nd Year

BCA–302 INTERNET & WEB DESIGNING

Name of the Program	Course Code	Name of theCourse	Course Outcomes
BCA	**BCA–302**	**INTERNET & WEB DESIGNING**	After completion of this course, the students will be able to, • Students should be able to visualize the inside working of internet technology and can interpret the functioning of action done by user on web pages. • Students will be able to learn the protocols that are working on client server architecture of web application. • Students will be able to use web server and identify the need of client side technologies. • Student will be able to use different tags of HTML that can create a simple web pages. • Students will learn how to make web pages interactive and graphically enrich presentation using CSS. • Student will be able to use client side validation and verification of data. They should be able to develop thin client. • Student will be able to use scripting data types and use of array with built in functions. • Students will be able to perform data processing on client side. • Students will be able to use functions and API available in javascript. • Students will learn how to bind data with different technologies available in web services. • Students will learn how to use java language in html page to create JSP.

			• Students will have hands-on experience to use java programming for server side scripting. • Students will be able to learn different functionality that are available in jSP to control data navigation on different web pages.

Course Outcomes

BCA–303 JAVA PROGRAMMING

Name of the Program	CourseCode	Name of theCourse	Course Outcomes
BCA	**BCA-303**	**JAVA PROGRAMMING**	After the completion of this course the students • Student will be able to understand the fundamental concepts of Java, including data types, variables, and operators. • Student will be able to develop proficiency in object-oriented programming using Java, including classes and objects. • Student will learn how to create and manipulate arrays and strings in Java for efficient data storage and retrieval. • Student will be able to learn about inheritance in Java and polymorphism to promote code reuse and hierarchy within your applications. • Student will learn the principles of exception handling in Java to write robust and errortolerant code. • Student will be able to gain an understanding of memory management in Java, including garbage collection mechanism. • Student will explore Java's input/output streams and file handling for data input and output operations. • Student will become expert in using Java for graphical user interface (GUI) development using AWT. • Student will be able to understand multithreading and concurrency in Java to create efficient, parallel programs. • Student will be able to develop real-world Java applications and projects to apply the knowledge and skills acquired throughout the course.

Course Outcomes

BCA-304 SOFTWARE ENGINEERING

Name of the Program	CourseCode	Name of theCourse	Course Outcomes
BCA	**BCA-304**	**SOFTWARE ENGINEERING**	After completion of this course, Students will be able to • Students will be able to recall the key phases of the software development life cycle. • Students will be able to identify different process models commonly used in software engineering. • Students will be able to explain the importance of user requirements in selecting an appropriate process model. • Students will be able to describe the purpose and activities involved in various software development phases. • Students will be able to apply software analysis, design, implementation, testing, and maintenance techniques in real-world scenarios. • Students will be able to analyze the strengths and weaknesses of different software development processes within each phase of the product life cycle. • Students will be able to identify potential risks and challenges in software development projects and propose mitigation strategies. • Students will be able to design a software architecture that meets specific functional and non-functional requirements. • Students will be able to evaluate the effectiveness of chosen software engineering methodologies and make recommendations for process improvement.

			• Students will be able to critically assess the quality and reliability of software products and suggest improvements or enhancements

Course Outcomes

BCA-401 RELATIONAL DATA BASE MANAGEMENT SYSTEM

Name of the Program	CourseCode	Name of the Course	Course Outcomes
BCA	**BCA-401**	**RELATIONAL DATA BASE MANAGEMENT SYSTEM**	After the completion of this course the students • Students can choose the most suitable type of database management system for different business scenarios. • Students will learn to ensure data integrity and consistency. • Students will grasp the fundamental concepts and principles of RDBMS, including tables, relationships, key constraints. • Students will gain proficiency in writing SQL queries to retrieve, insert, update, and delete data from relational databases. • Students will learn about SQL transaction control statements and error handling techniques. • Students will be able to design and optimize the database schema for efficient data storage and retrieval. • Students will understand the principles of database normalization for performance optimization. • Students will be able to design and optimize complex SQL queries that involve multiple tables, subqueries, and various join types. • Students will grasp the concepts of stored procedures and triggers and use them to automate tasks and maintain data consistency. • Students will learn to implement security measures and access control to protect the confidentiality and integrity of the database.

Course Outcomes

BCA-402 DIGITAL ELECTRONICS, COMPUTER SYSTEM ARCHITECTURE, AND ORGANISATION

Name of the Program	CourseCode	Name of theCourse	Course Outcomes
BCA	**BCA-402**	**DIGITAL ELECTRONICS, COMPUTER SYSTEM ARCHITECTUR, AND ORGANISATION**	After completion of this course, the students will be able to, • Basic computer architecture will be learnt by the students. Students will get to know the process of instruction execution and interrupt cycle. They will be able to understand Von Neumann architecture. • Students will understand number systems like decimal, binary, octal and hexadecimal. They will be able to convert number in one format to another. • Students will be able to perform operations on binary numbers like addition, subtraction etc. they will be able to represent negative numbers using methods such as sign bit, 1s complement and 2s complement. • Students will learn various logic gates like AND, OR, NOT, NAND, NOR and XOR. Students will be able to simplify Boolean equation using algebraic and K map methods. • Students will be able to design and implement

			combinational circuits theoretically. Circuits like adders, multiplexers and decoders will be learnt and practiced by the students. • Students will learn the functions of latches and flip flops. They will be able to design various sequential circuits like counters and registers. • Students will be able to follow working of various types of memory of computers. They will be able to raw one bit memory cell and also multi byte memories. • Students will learn various input output architecture like programmed I/O, interrupt driven I/O and DMA. • Students will understand internal architecture of CPU. They will learn addressing modes, instruction set components, instruction design architecture and some sample instruction set types. • Students will learn basic ALU and CU architecture. They will be able to understand various types of control structure, micro operation codes and micro programs

Course Outcomes

BCA-403 FILE & DATA STRUCTURE

Name of the Program	CourseCode	Name of theCourse	Course Outcomes
BCA	**BCA-403**	**FILE & DATA STRUCTURE**	After completion of this course, the students will be able to, • Define what an algorithm is and explain its basic structure and properties. • Classify data structures and describe their uses in problem-solving. • Explain the concept of time complexity and analyze algorithms using asymptotic notations. • Differentiate between various types of linked lists and their applications. • Understand the internal and external sorting techniques and their significance. • Develop algorithms for specific problem-solving tasks, considering their efficiency. • Implement and manipulate linked stacks and linked queues in practical applications. • Write and analyze code for common sorting and searching algorithms. • Analyze the efficiency of algorithms using a priori analysis, asymptotic notations, and worst-case complexities. • Evaluate and optimize recursive programs for better performance. • Compare the advantages and disadvantages of different data structures for specific scenarios.

			• Design and create complex data structures, such as threaded binary trees and m-way search trees. • Develop algorithms for graph traversals and solving specific graph problems. • Evaluate the efficiency and appropriateness of data structures and algorithms in solving real-world problems.

Course Outcomes

BCA-404 INTRODUCTION TO STATISTICS

Name of the Program	Course Code	Name of theCourse	Course Outcomes
BCA	**BCA-404**	**INTRODUCTION TO STATISTICS**	After completion of this course, the students will be able to, • Students will be able to understand the have the basic knowledge on data collection and various statistical elementary tools. • Students will be able to display data graphically and interpret graphs: histograms, and box plots. • Students will be able to recognize, describe, and calculate the measures of location of data: quartiles and percentiles. • Students will be able to recognize, describe, and calculate the measures of the center of data: mean, median, and mode. • Recognize, describe, and calculate the measures of the spread of data: variance, standard deviation, and range. • Have the critical thinking in the theory of probability and its applications in real life problems. • Find the inter-relation between two or more phenomena with the help of curve fitting and correlation-regression analysis. • Understand the basic components of sampling and have the knowledge

			on exact sampling distributions which are essential for estimating and testing hypothetical statements. • Understand critically the problems that are faced in testing of a hypothesis with reference to the errors in decision making. • Apply the different testing tools like t-test, F-test, chi-square test, etc to analyse the relevant real life problems. • Know the various sampling methodologies and their efficiencies in theoretical and practical aspects.

Course Outcomes

3rd Year

BCA-501 Windows Programming using VB .Net

Name of the Program	CourseCode	Name of theCourse	Course Outcomes
BCA	**BCA-501**	**Windows Programming using VB .Net**	After completion of this course, the students will be able to, • Students will be familiar with .Net framework and its working with API. • Students will learn the memory space acquired by program in RAM and naming conflicts. • Students will be able to differentiate the data type and operator available in vb.net and other programming language. They will also know the selection and use of operators and data types. • Students will acquire the knowledge of different conditional statement and its use in programming. • Students will able to learn new iterative statements available in vb.net. • After learning the different oops feature students will able to apply concepts of APIE in designing the class to solve real world problem. • Using oops concept students will be able to design and use classes in program. • Students will be able to implement typecasting and type conversion among different types of data types. • Students will be able to select whether function or procedure should be using during designing the class. • Students will be able to use different types of scopes in class, function and variable to design and • implement classes properly. • Students will be able to define

			same methods in different ways and also how to use existing classes in new class using inheritance and polymorphism. • Students will be able to apply different api available in vb.net and how to use them. They will also learn how handle error and exception in program. • After having enough knowledge in above topics, students must be able apply the oops concepts in designing real life application using Graphical user interface available in VB.NET. • Students will be able to handle different types of error in gui design and its application. • Using GUI design for real world problem, students should be able to handle real life run time problems that may occur during execution of program. • Students must develop ability to develop multiple form and communication among them. • After developing gui application, students will be able to connect the application with data base to develop real application. • Students will be familiar with .Net framework and its working with API.

Course Outcomes

BCA-502 GRAPHICS & MULTIMEDIA

Name of the Program	CourseCode	Name of theCourse	Course Outcomes
BCA	**BCA-502**	**GRAPHICS & MULTIMEDIA**	After completion of this course, the students will be able to, • Students will understand the fundamental concepts of computer graphics, including pixels, colors, frame buffer, bit plane etc. • Students will learn the coordinate systems, and 2-D transformations. • Students will learn to use graphics primitive and scan conversion. • Students will be able to use homogeneous coordinate for rotation and reflection of 2-D objects. • Students will learn Line Clipping, Polygon Clipping and Colour filling algorithms. • Students will gain a deep understanding of the principles behind hidden lines and surfaces in computer graphics. • Students will gain a strong understanding of the fundamental principles behind curves and splines in computer graphics including B-spline curves, Bezier curves, and parametric representation of curves. • Student will have a solid understanding of the fundamental principles and concepts related to multimedia, including text, graphics, audio, video, and their integration. • Student will be able to understand the fundamental principles of animation, including timing, spacing, squash and stretch, anticipation, and follow-through. • Student will be able to develop real world objects and represent them (2-D) on computer screen with transformation, reflection and with colour models.

Course Outcomes

BCA-503 COMPUTER NETWORK, DATA COMMUNICATION, AND CLIENT SERVER TECHNOLOGY

Name of the Program	CourseCode	Name of theCourse	Course Outcomes
BCA	**BCA-503**	**COMPUTER NETWORK, DATA COMMUNICATION, AND CLIENT SERVER TECHNOLOGY**	After completion of this course, the students will be able to, • Students will be able to learn the basics of Data Transmission., Basic Concepts and Terminology of computer communication. Students will come to know about data communication models like OSI and TCP/IP. • Students will learn about the 7 layers of Open System Interconnection. Students will come to know about analog and digital signals, encoding of data into signals. Students will also be exposed to communication mediums such as guided and unguided mediums. • Students will be familiarized with various network topologies, pros and cons thereof. Students will also learn about various signal impairments like noise, attenuation and distortions. • After studying Data Link Layer, students will come to know about machine to machine communication. The students will also learn about the two parts of DLL which are LLC(Logical link control) and MAC(Medium access control) • Students will be exposed to complex functions of LLC like flow control, retransmission strategies and error detection and correction mechanisms such as parity bit and CRC. • Students will learn about MAC protocol categories such as contention based and polling based

			protocols. The contention based protocols like ALOHA, Slotted ALOHA, CSMA, CSMA/ CD and AD will be learnt by the students. Polling based protocols like Token bus and Token ring protocols will be familiarized to the students. • Students will be able to understand functioning of network addressing system. Students will be able to identify IP address and they will also be able to configure network addressing system. They will be able to identify different classes of IP address. • Students will be able to understand routing protocols and will also learn the working methodologies of various routing algorithms. Students will be able to apply data structure concepts in routing protocols. • Students will be able to understand the notion of process to process communication. Students will be able to define and identify socket address. TPDU, TCP and UDP. They will also learn to deal with congestions and congestion control methodologies. • Students will be able to identify and understand various application layer services and protocols such as ftp, http, email, domain name system and name resolution protocols.

Course Outcomes

BCA-504 Business Accounting & ERP (Enterprise Resource Planning)

Name of the Program	CourseCode	Name of theCourse	Course Outcomes
BCA	**BCA-504**	**Business Accounting & ERP (Enterprise Resource Planning)**	After completing the Money, Banking and Finance course in BBA(IB); Semester IV, students will able to • Students will be able to understand the basic terminologies of the course • Students will be able to identify transactions, and different types of accounts • Students will be able to understand basic rules of accounting and recording of transactions • Students will be able to record and classify the transactions • Students will be able to prepare various books, accounts and statements leading to finding the outcome of an enterprise • Students will be able to recognise capital and revenue transactions • Students will be able to prepare the final statements to compute the final results • Students will be able to understand the concepts of accounting in special types business forms like joint venture branches and consignment • Students will be able to understand the flow of information leading to system development for computerised accounting • Students will be able to record transactions and obtain the results in a professional accounting assignment

Course Outcomes

BCA-601: Web Technology (Elective 1)

Name of the Program	CourseCode	Name of theCourse	Course Outcomes
BCA	**BCA-601**	**Web Technology (Elective 1)**	After the completion of this course the students • Students will grasp the importance of using semantic HTML elements to enhance the accessibility • Students will learn how to integrate CSS (Cascading Style Sheets) with HTML to control the visual presentation of web pages. • Students will become proficient in writing well-structured HTML code to create and format web content. • Students will learn to publish web pages to the internet and become aware of best practices for web development, including version control, file organization, and web hosting. • Students will learn to model and validate XML data using Document Type Definitions (DTDs) or XML Schemas (XSD) for ensuring data consistency and structure. • Students will understand XML transformation technologies like XSLT to convert XML data into different formats. • Students will understand Document Object Model (DOM) JavaScript to dynamically interact with a web page. • Students will learn to handle user events, create event-driven applications, and work with asynchronous operations, such as AJAX. • Students will understand to integrate JSP with Java code, enabling them to create server-side logic, handle user input, and

			interact with databases. • Students will gain knowledge in implementing user authentication and security measures within JSP applications, such as handling sessions and protecting against common web security vulnerabilities.

Course Outcomes

BCA-602 : CONCEPT OF DATA MINING AND DATA WAREHOUSING (Elective 2)

Name of the Program	CourseCode	Name of theCourse	Course Outcomes
BCA	**BCA-602**	**CONCEPT OF DATA MINING AND DATA WAREHOUSING (Elective 2)**	After Completion of this course, students will be able to • Students will understand the fundamental concepts of E-commerce. • Students will identify and describe major E-commerce business models. • Students will explain the forces and visions driving the E-commerce revolution. • Students will analyze how the internet and the World Wide Web have transformed the business landscape. • Students will understand the technology background and infrastructure of E-commerce. • Students will develop a systematic approach to building an E-commerce website. • Students will select appropriate server software and hardware for E-commerce sites. • Students will evaluate and choose E-commerce site tools for specific purposes. • Students will assess the security threats in the E-commerce environment and propose technology solutions. • Students will analyze the policies, procedures, and laws related to E-commerce security and encryption. • Students will design and implement E-commerce payment systems, including credit card transactions and digital payment systems. • Students will explore and propose solutions to ethical, social, and

Course Outcomes

BCA-604 PROJECT AND VIVA

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BCA	**BCA-604**	**PROJECT AND VIVA**	After Completion of this course, students will be able to • Student will be able to define and design the real life problem in computer science. • Student will be able to design software using SDLC and accordingly will be able to decide software and hardware requirement. • Students will be able to perform and evaluate feasibility studies like cost-benefit analysis, technical feasibility, time feasibility and operational feasibility for the project. • Able to construct and evaluate data dictionaries/ decision trees/ decision table. • Students will create and evaluate graphical tools as systems flow charts, entityrelationship (er) diagrams and state transition diagrams • Students will develop skill to code for given problem site tools for specific purposes. • Students will be able to design system input and output and can perform different types of testing to evaluate software application. • Students will know the concept of verification and validation of data. • Able to understand the concept of User Interface design. • They will know how to document the software planning and execution properly.