Course Outcomes

BCA

Course Outcomes
BCA 1 to 6 Sem.

SEMESTER-I		
BSBC101	Communication-I	1. Acquire knowledge about the various principles of communication, understand its various stages and the role of audience and purpose, deal with the barriers that affect communication in a professional set up. 2. Understand the different channels that are functional at the work place. 3. Learn the importance of verbal and non-verbal communication in the professional world along with its uses. 4. Learning the uses and application of RP to improve pronunciation. 5. Understanding the importance of intonation, word and sentence stress for improving communicative competence, identifying and overcoming problem sounds, Importance of syntax for cultivating effective language skills.
HVPE101	Human Values and Professional Ethics	1. Understanding the need, basic guidelines, content and process for value education. 2. Understanding happiness and prosperity correctly. 3. Methods to fulfill the above human aspirations. 4. Understanding the needs of self and body & the harmony in nature. 5. Ability to utilize the professional competence for augmenting universal human order.
BSBC102	Programming in C	1. Identify and understand the working of key components of a computer system (hardware, software, firmware etc.)., Understand computing environment, how computers work and the strengths and limitations of computers. 2. Identify and understand the various kinds of input-output devices and different types of storage media commonly associated with a computer. 3. Identify and understand the representation of numbers, alphabets and other characters in computer system. 4. Understand, analyze and implement software development tools like algorithm, pseudo codes

		and programming structure. 5. Study, analyze and understand logical structure of a computer program, and different construct to develop a program in 'C' language & Write small programs related to simple/ moderate mathematical, and logical problems.
BSBC103	Mathematics- I	1. Learn fundamental concepts of set theory, operation on sets, venn diagrams, statement problems, laws, duality, partitioning of a set. 2. Understand the concept of graph theory and how to make various types of graphs. 3. Understand the concept of relation and types of relations, graph of relations, properties of relations and matrix representation. 4. Understand logic operations, truth tables, arguments and laws of logic, mathematical system and propositions over universe. 5. Principle of mathematical induction, recursion, recurrence relations, binomial theorem.
BSBC104	Information Technology	1. Identify system components and utilize computer hardware and software. 2. To provide basic Knowledge of Number System 3. Basic Knowledge of input/output devices & various types of memories. 4. Become proficient in using the features of MS Office. 5. Understand computer networks and security within the context of information technology.
BSBC105	Software Lab-I (Programming in C)	1. Be able to implement, test, debug, and document programs in C. 2. Understand low-level input and output routines. 3. Program with pointers and arrays, perform pointer arithmetic, and use the pre-processor. 4. Be able to write programs that perform explicit memory management. 5. Understand and use the common data structures typically found in C programs — namely arrays, strings.
BSBC106	Software Lab-II (Information	1. Familiarize with PC and WINDOWS commands, File creation, Editing, Directory creation.

	Technology)	2. Become proficient in using the features of word processing in Microsoft Word. 3. Become proficient in using spreadsheet software and be able to create technical and complex spreadsheets for data analyses using Microsoft Excel. 4. Use a database such as Microsoft Access. & Implementation of MS DOS. 5. Develop effective and professional business presentations using Microsoft Power Point.
SEMESTER-II		
EVSC 101	Environmental Science	1. Measure environmental variables and interpret results. 2. Evaluate local, regional and global environmental topics related to resource use and management 3. Propose solutions to environmental problems related to resource use and management. 4. Interpret the results of scientific studies of environmental problems. 5. Describe threats to global biodiversity, their implications and potential solutions.
BSBC 201	Communication-II	1. Basics of communication. 2. Better Linguistic Knowledge. 3. Presentation skills & Interview skills. 4. Project report. 5. It develops confidence in students overall personality.
BSBC 202	Mathematics-II	1. Learn fundamental mathematical concepts of matrix and determinant and how to apply them for finding the solution of equations. 2. Understand the concepts of differential calculus and how to apply them for finding the maxima and minima. 3. Learn the concepts of integral calculus in which they find integration by parts, By partial fraction, by substitution and learn about definite, indefinite integrals. 4. Understand the Trapezoidal method, Simpson's1/3 rule and Simpson's 3/8 rule using integration. Problems related to compound interest,

		depreciation and Annuities. 5. Understand the concepts of Statistics in which they learn about measures of central Tendency, mean, median, mode, measures of dispersion ,range, mean deviation, Standard deviation, coefficient of variation.
BSBC 203	OOPS Using C ++	1. Creating class and objects in C++. 2. Basic of Structures and Unions, Functions. 3. Implementing inheritance, polymorphism and object relationship in C++. 4. Designing methods and procedures, Constructor and destructor programs. 5. Data manipulation through file in C++.
BSBC 204	Computer System Architecture	1. Introduction to computer and CPU, Stored Program concepts. 2. Introduction to Registers, Micro operations, Common Bus System. 3. Introduction to Instruction, Instruction Cycle, Interrupt and Interrupt Cycle. 4. Addressing Modes, Concept of I/O bus , DMA Controller. 5. Memory Hierarchy, Cache Memory, Replacement Algorithms, Mobile Devices Architecture & Synchronous and Asynchronous Data Transfer.
BSBC 205	Workshop on Web Development	1. Understand, analyze and apply the role of languages like HTML, DHTML, CSS, and Java Script. 2. Analyze a web page and identify its elements and attributes in comparison to traditional projects. 3. Create dynamic web pages using Javascript. 4. Create web pages using HTML, DHTML, CSS. 5. Description of Web Services its Uses & Types.
BSBC 206	Software Lab-III (OOPS Using C++)	1. To be able to apply an object oriented approach to programming and identify potential benefits of object-oriented programming over other Approaches. 2. To be able to reuse the code and write the classes which work like built-in types. 3. To be able to design applications which are easier to debug, maintain and extend.

		4. To be able to apply object-oriented concepts in real world applications. 5. To understand the concepts of file handling and its operations.
SEMESTER III		
BSBC301	System Analysis & Design	1. Understand the principles and tools of systems analysis and design - Understand the application of computing in different context. 2. Understand the professional and ethical responsibilities of practicing the computer professional including understanding the need for quality. 3. Basic of System Testing, Implementation 4. Solve a wide range of problems related to the analysis, design and construction of information systems. 5. Be able to present projects.
BSBC302	Data Structures	1. Understanding of data structure. its objectives , time and space complexity 2. Understanding of various linear data structure , like stack ,queue and their implementation 3. Understand the concept of linked list. 4. Understanding of non-linear data structure , tree and its implementation 5. Implement searching and sorting algorithms in solving larger problems.
BSBC303	Digital Circuits & Logic Design	1. An ability to define different number systems, binary addition and subtraction, 2's complement representation and operations. 2. To be able to apply the principles of Boolean algebra to manipulate and minimize logic expressions. 3. To be able to use K-maps to minimize and optimize two-level logic functions up to 4 variables and perform an algorithmic reduction of logic functions. 4. Obtain knowledge of combinational circuits and design procedure of various combinational logic circuits like Adder, Sub tractor, Comparator, MUX/DEMUX, Parity checker etc. 5. Combinational circuits, flip-flops, counter and shift

		registers.
BSBC304	Basic Accounting	1. To understand the basic accounting concepts. 2. To understand generally accepted accounting principles. 3. To understand Journal, Ledger, trail balance & Final Accounts & the Bank Reconciliation Statement. 4. To understand the sources of raising capital in corporate. 5. To understand the application of computers in accounting.
BSBC306	Software Lab-IV (Data Structures)	1. Implementation of linked list using C/C++ 2. Implementation of stack queue using linked list and its operation like searching, inserting, deleting. 3. Implementation of binary tree and its operations. 4. Implementation of different sorting and searching techniques using C/C++. 5. Programs to demonstrate fundamental algorithmic problems including tree traversals, graph traversals and shortest path.
BSBC307	Hardware Lab-I (Digital Circuits & Logic Design)	1. An ability to operate laboratory equipments. 2. An ability to construct, analyse and troubleshoot simple combinational and sequential circuits. 3. Study of logic gates and realization of OR, AND, NOT and XOR functions using universal gates. 4. Design & implement combinational circuits, sequential circuits. 5. Obtain knowledge of different Flip-flops, their working and Truth Table Verification.
SEMESTER IV		
BSBC401	Software Engineering	1. Understand the process to be followed in SDLC. 2. Define formulate and analyze a problem. 3. Apply design and testing principles to software project development & Design Methodologies. 4. Apply the project management and analysis principles to software project development. 5. Knowledge about software development life cycle and problem articulation.
BSBC402	Microprocessors & Microcontrollers	1. Describe the basic architecture of Microprocessor and Microcontroller system.

		2. Describe the addressing modes of the system, Instruction Cycle 3. To write the assembly language programming for INTEL 8085 microprocessor. 4. To describe a typical I/O interface& to discuss timing diagrams. 5. To describe different types of memory used in Microcontroller system.
BSBC403	Operating Systems	1. Identify the role of Operating System. To understand the design of control unit. 2. Understanding CPU Scheduling, Synchronization, Deadlock Handling and Comparing CPU Scheduling Algorithms. Solve Deadlock Detection Problems. 3. Describe the role of paging, segmentation and virtual memory in operating systems. 4. Description of protection and security and also the Comparison of UNIX and Windows based OS. 5. Defining I/O systems, Device Management Policies and Secondary Storage Structure and Evaluation of various Disk Scheduling Algorithms.
BSBC404	Database Management Systems	1. Describe fundamental elements of RDBMS. 2. Explain the basic concepts of relational data model, relational database design, relational algebra and database language SQL. 3. Design E-R diagram to represent simple database applications scenarios. 4. Criticize a database and improve the design by normalization. 5. Basic of Database protection & Distributed databases.
BSBC405	Hardware Lab-II (Microprocessors & Microcontrollers)	1. Introduction to assembly language and its fundamentals. 2. Programming Data transfer Instructions. 3. Programming Arithmetic Instructions, Logical Instructions, shift rotate Instruction & transfer control instructions. 4. Complete the experiments in laboratory and present

		the technical report. 5. Describe the architecture of microprocessor and its peripheral devices.
BSBC406	Software Lab-V (Database Management Systems)	1. Understand, appreciate and effectively explain the underlying concepts of database technologies. 2. Design& implement a database schema for given problem domain. 3. Populate & query a database using SQL DML/DDL commands. 4. Normalize a database. 5. Programming PL/SQL including stored procedures, stored functions, cursors, packages.
SEMESTER V		
BSBC501	Data Warehousing & Mining	1. Basics of data ware house and Mining 2. Various Transaction Processing Systems 3. Data ware house Implementation / Design / Technical considerations 4. Concept of Artificial Intelligence, Multidimensional data models & association ,correlation algorithms 5. Various prediction techniques and clustering algorithms.
BSBC502	Programming in Java	1. Understand the concept of OOPs as well as the purpose and usage principles of Inheritance, polymorphism, encapsulation etc. 2. Understand the basic concepts of classes and objects. 3. Understand JVM Concept , Data types and Operators, Strings 4. Understand Internet Programming Using Java Applets & Graphic Programming & Make use of array, constructors, Inheritance, Packages and Interfaces. 5. Understand the concept of Exceptional Handling/Event Handling & Java I/O Handling.
BSBC503	Management Information System	1. Solve the problems related to the analysis, design & construction of MIS. 2. Demonstrate the knowledge & ability to define the concept & definition of Information systems. 3. Describe the system development stages.

		4. Describe the organizational structure & business processes within these structures. 5. Describe the system design & implementation.
BSBC504	Workshop on Advanced Web Development	1. Getting started with Active Server pages, setting up internet Information server, using ASP without IIS. 2. Dissecting you first ASP script, writing ASP code without using comments. 3. Working with variables, constants, arrays, VB script operators & Understanding VBscript control structures, Typecasting variables. 4. Working with Objects, Events & Communicating with user, creating, designing & submitting forms. 5. Working with request objects, how to write cookies, Debugging ASP scripts, Reading database using ASP. Examining the records.
BSBC505	Software Lab-VI(Programming in Java)	1. Internet Programming using Applets. 2. Apply basics of event programming. 3. Apply String Handling Functions. Install JDK and Its Editor 4. Method to write, saves, compiles and executes Java Programs. 5. Implement the concepts of classes, loops, conditions & constructors, Inheritance, concepts of Packages and Interfaces.
BSBC506	Project Work -I	1. Various visual basic tools. 2. Commands of VB & SQL 3. Software development process. 4. Able to exhibit both analytical and synthetically skills. 5. Able to know the complete project life cycle and the project time estimation & its management
SEMESTER VI		
BSBC601	Principles of Management	1. Evaluate approaches to addressing issues of diversity. 2. Integrate management principles into management practices. 3. Specify how the managerial tasks of planning, organizing, and controlling can be executed in a variety of circumstances. 4. Assess managerial practices and choices relative to

		ethical principles and standards. 5. Determine the most effective action to take in specific situations.
BSBC602	Computer Graphics	1. Understand the foundations of Computer graphics. 2. Understand the concept of Geometric mathematical and algorithmic concepts necessary for programming computer graphics. 3. Understand the comprehension of window clipping and view port object representation in relation to images displayed on screen. 4. Understand the concepts of geometric and composite transformations on objects. 5. Understand the concepts of shading, surface Elimination on the objects.
BSBC603	Computer Networks	1. Understanding network models. 2. Understand different network technologies. 3. Understand the effects of using different networking topologies. 4. Be updated with different advanced network technologies that can be used t connect different networks. 5. Be familiar with various hardware and software that can help protect the network, layers of OSI model and their functionality.
BSBC604	Information Security	1. To introduce Information Security Concepts, Principles of Security, Policy Framework, Role based Security in an organization, Components and Balancing Information Security , Approaches to information Security Implementation, Security Systems Development Life Cycle. 2. To clear the concepts of Security Threats and Vulnerabilities, Desktop Security, PGP and S/MIME, Web Security, Web authentication, Database Security, Firewalls. 3. To learn the techniques of Security Management and Laws, Access Control , Intrusion Detection Systems and Intrusion Prevention Systems, Security Procedures and Guidelines, Business Ethics and Best Practices, Security Assurance, Security Laws, IPR, International Security

		Standards, Security Audit. 4. To make students aware of Cryptography: Concepts and Techniques, Symmetric and Asymmetric Key Cryptography, Steganography, Symmetric Key Ciphers-DES, AES (Structure and Analysis), RSA Algorithm and its Analysis. Digital Signatures. 5. Use the concepts of Authentication Protocols.
BSBC605	Software Lab-VII (Computer Graphics)	1. Implement simple graphics programs using C/C++ 2. Write a program like draw a line, circle, and ellipse. 3. Implement the programs with flood fill functions. 4. Image Editing using Clipping techniques & 2D, 3D techniques. 5. Analyze and evaluate the use of computer graphics methods in practical applications and describe effects such as texture mapping and ant aliasing.
BSBC606	Project work II	1. Able to do some innovative work with applying the knowledge gained from various courses undergone in the earlier years. 2. Able to exhibit both analytical and synthetically skills. 3. Able to know the complete project life cycle and the project time estimation & its management. 4. Able to gain knowledge of various simulation tools. 5. Able to culture working in a team.