

Department of BCA

Course Outcome

First semester			
Sr. No	Subject Code	Subject Name	Course outcome
1.	BCA0101	Mathematics-I	<ul style="list-style-type: none">• To impart the required knowledge of Mathematics and statistics for managerial activities among students.• To inculcate in students the fundamental mathematical background in computer science.• To gain knowledge about Sets, Relations Functions, Matrices, Mathematical logic, and Group theory.• Understand the basic concepts of Sets, Relations Functions, Matrices, Mathematical logic, and Group theory.• Develop analytical ability to solve real-world problems using these methodologies.
2.	BCA0102	Applied English	The prescribed course equips students with nuances of language that includes proficiency in grammar, its effective usage in speaking and writing. It also develops their personality. → It further helps them to prepare for various competitive exams and to keep up with the increasing demand of English in Indian society. The practical work improves their communication and writing skills, and at the same time equipping them to use modern forms of communication.
3.	BCA0103	Computer Fundamentals	After successfully completing this course ,a student will be able to : Converse in basic computer terminology. Possess the knowledge of basic hardware peripherals. 1. Understand model, components of computer and how it works. 2. Understand the concept of input and output devices of Computers in detail. 3. Understand RAM, ROM and their types in detail. 4. Understand the concepts, structure, types and design of operating Systems.
4.	BCA0104	C Programming	Upon successful completion of the course, a student will be able to: Analyze a given problem and develop an algorithm to solve the problem Improve upon a solution to a problem Use the 'C' language constructs in the right way Design, develop and test

			programs written in 'C' Understand the basic terminology
5.	BCA0105	Office Automation Tools	<p>By learning the course, the students will be able:</p> <ol style="list-style-type: none"> 1. To perform documentation such as basic editing functions, formatting text, copy and moving objects and text. Learning the formatting skills on paragraphs, tables, lists, and pages. 2. To perform accounting operations such as Learning formulas, creating charts and graphs that can easily explain or simplify complex information or data. Analyzing data using Pivot Tables and Pivot Charts. 3. To perform presentation skills. <p>Create slide presentations that include text, graphics, animation, and transitions.</p>
6.	BCA0104(P)	C Programming Lab-I	<p>To write programs to understand selection and iterative statements. To write programs to implement usage of 1D and 2D arrays. To develop code reusable programs using user defined functions. co4: To write programs to solve memory access problems using pointers. To write programs using user defined data types. To develop programs to learn file handling mechanism.</p>
7.	BCA0105(P)	Office Automation Tools Lab-II	<p>At the end of this Lab course students will be able to:</p> <ol style="list-style-type: none"> 1. Students will have a working knowledge of paragraph formatting, macro and mail-merge in MS-Word. 2. Students will have a working knowledge of basic functions and formulas in MS-Excel. 3. Create presentation by adding slides, applying animations, set times to slides, linking to other files.

Second semester

Sr. No	Subject Code	Subject Name	Course outcome
1.	BCA0201	Mathematics-II	<ul style="list-style-type: none"> • To understand the basics concepts of Discrete Mathematical Structures. • To get the Knowledge about sets, relations and functions. • To study the basics of lattices and graphs. • To get familiar with propositional logic.
2.	BCA0202	Communicative English	<p>On completion of the course the student should be able to:</p> <ul style="list-style-type: none"> • Develop the student's ability to use English language accurately and effectively by enhancing their communication skills • Mastering the art of a professional business presentation • Distinguish different communication process and its practical application • More effective written communication
3.	BCA0203	Digital Electronics	<p>After studying this course the students would gain enough knowledge :</p> <ol style="list-style-type: none"> 1. Have a thorough understanding of the fundamental concepts and techniques used in digital electronics. 2. To understand and examine the structure of various number systems and its application in digital design 3. The ability to understand, analyze and design various combinational and sequential circuits. 4. Describe number systems and its arithmetic operations and Illustrate Use of Boolean algebra. 5.illustrate truth table and logic circuits in SOP, POS form & conversion of SOS, POS forms into canonical forms. 6. Formulate and apply Karnaugh Map to reduce Boolean expressions and logic circuits to their simplest POS and SOP forms. 7. Explain the working of combinational and sequential circuits with characteristic equation and truth table. 8. Design and implement combinational circuits .
4.	BCA0204	Data Structures	<p>Students develop knowledge of basic data structures for storage and retrieval of ordered or unordered data.</p> <p>Students develop knowledge of linked lists.</p>

			<p>Students develop knowledge of applications of data structures including the ability to implement algorithms for the creation, insertion, deletion, searching, and sorting of each data structure.</p> <p>Student develop Knowledge of Tree</p> <p>Student develop Knowledge of Graph</p>
5.	BCA0205	Data Base Management System	<p>Understand the basic principles of database management systems.</p> <ol style="list-style-type: none"> 1. Draw Entity-Relationship diagrams to represent simple database application scenarios. 2. Write SQL queries for a given context in relational database. 3. Discuss normalization techniques with simple examples. 4. Describe transaction processing and concurrency control concepts.
6.	BCA0204(P)	Data Structures Lab-III	<p>Understand basic Concept of the data structure using C program</p> <p>Implementing STACK Operations using C Program</p> <p>Exercise linked List using C programs</p> <p>Understand nodes concepts in Linked List using C programs</p> <p>Implementing QUEUE Operations using C Program</p>
7.	BCA0205(P)	Data Base Management System Lab-IV	<p>Students get practical knowledge on designing and creating relational database systems.</p> <ol style="list-style-type: none"> 1. To describe data models and schemas in DBMS. 2. To understand the features of database management systems and Relational database. 3. To use SQL- the standard language of relational databases. 4. To understand the functional dependencies and design of the database.

Third semester

Sr. No	Subject Code	Subject Name	Course outcome
1.	BCA0301	Mathematics-III	<p>To Understand the use of the basic data structures along with their applications.</p> <ul style="list-style-type: none"> • To get the knowledge about the important mathematical concepts their application. • Evaluate the probabilities and conditional probabilities. • Construct point estimators using the method of maximum likelihood
2.	BCA0302	Business Practices and Management	<p>The course addresses the methods and techniques required to analyze, design, implement, automate, and evaluate business processes. Structured along the phases of the Business Process Management (BPM) life cycle, students learn to analyze organizational performance from a process perspective, redesign processes using value-focused techniques, design workflows and implement them in BPM systems.</p> <p>Upon completion of this course participants will be able to assess the efficiency and effectiveness of an organization from a process perspective, conduct process improvement projects, and determine the role of technology in supporting corporate processes.</p>
3.	BCA0303	Computer Organization	<ol style="list-style-type: none"> 1. Learned and evaluated the basics of computer architecture. 2. Understand the basics of instructions sets and their impact on processor design 3. Demonstrate an understanding of the design of the functional units of a digital computer system 4. Design a pipeline for consistent execution of Synthesize with minimum hazards 5. Manipulate representations of numbers stored in digital computers
4.	BCA0304	Object Oriented Programming with C++	<p>To understand Object Oriented Programming concepts.</p> <p>An ability to create a simple C++ Programming.</p> <p>Implement the concept of classes and objects.</p> <p>An ability to develop a program using any type of Inheritance.</p> <p>To understand and develop a program using files</p>

			operations.
5.	BCA0305	Desktop Publishing and Designing	<ol style="list-style-type: none"> 1. Learning to import text and organize the layout of text boxes and placeholders within a publication and other related features. 2. Formatting text and paragraphs as well as applying Microsoft's supplied styled and themes to enhance the overall look of your publication. 3. Introducing tools and features to edit/review your text as well as using tables for a more organized layout 4. Adding pictures and images to your Publication and using various tools to format and fine tune their appearance. 5. Using Publisher's tools to check on your design, preview, print and sent by email
6.	BCA0304(P)	Object Oriented Programming with C++ Lab-V	<p>Understand basic Structure of the C ++ PROGRAMMING, declaration and usage of variables</p> <p>Understand C++ programs using Class and operators</p> <p>Exercise conditional and iterative statements to Write C++ programs</p> <p>Understand for C++ programs using Pointers to access arrays, strings and functions</p> <p>Understand C++ programs using pointers and allocate memory using dynamic memory management functions.</p>
7.	BCA0305(P)	Desktop Publishing and Designing Lab-VI	<p>At the end of this Lab course students will be able to:</p> <ul style="list-style-type: none"> • Use Photoshop as a premier graphic design and image editing tool. • Effectively utilize the multiple methods of manipulating, retouching, refurbishing art work, photographs . • Introduced to the advanced theories of mask, alpha channel and clipping path . <p>After successful completion of the module, the students shall be able to:</p> <ul style="list-style-type: none"> • Create Documents and Templates, add text into documents • Create a book and export it into PDF

Fourth semester

Fourth semester			
Sr. No	Subject Code	Subject Name	Course outcome
1.	BCA0401	Personnel Management	<p>After completion of this course, the student will be able to develop:</p> <ol style="list-style-type: none"> 1. Integrated perspective on role of HRM in modern business. Ability to plan human resources and implement techniques of job design. 2. Competency to recruit, train, and appraise the performance of employees. 3. Rational design of compensation and salary administration. 4. Ability to handle employee issues and evaluate the new trends in HRM.
2.	BCA0402	Accounting	<p>To prepare and analyse the financial statements.</p> <ol style="list-style-type: none"> 1. Acquire the basic concept of accounting terms. 2. Journalize the ability to rectify the errors in bank reconciliation statement. 3. Exposed to various methods of depreciation and insurance accounting. 4. Demonstrate insight into single and double entry system of accounting. 5. Determine the basics concepts of financial accounting.
3.	BCA0403	System Analysis and Design	<p>Learn about system, SDLC, system planning and initial investigation, fact-finding and its techniques Define – structured analysis, its tools, feasibility study in detail and also learn about cost and benefit analysis with its final action Understand about system design, design methodologies, Input/output and form design with their classification, requirements, objectives, types and layout considerations Know about system testing, testing techniques, test plan and also understand about the system implementation, evaluation and maintenance with their types</p>
4.	BCA0404	Internet Technology & Web Page Design	<p>Understand the basics of Internet and Its Protocol. To Learn about HTML Language and its features. To learn about basic knowledge about CSS. Understand basic in Servlet and HTTP.</p>

			Understand basic of JSP and Cookies
5.	BCA0405	Programming in Visual Basic	<p>After the completion of the course, Students will be able to</p> <ol style="list-style-type: none"> 1. Understand the programming algorithm, process, and structure. 2. Understand and identify the fundamental concepts of object-oriented programming. 3. Understand and use the concepts of objects, primitive value, message, method, selection control structure, repetition control structures, object reference, container, and method parameter. 4. Know how to write and run a complete program. 5. Understand and identify the importance of object-oriented programming for the Internet based electronic commerce.
6.	BCA0404(P)	Internet Technology & Web Page Design Lab-VII	<p>Understand the language HTML, how HTML language tags are used, and how these tags are helpful in making website</p> <p>Describe basic knowledge of HTML and CSS</p> <p>Design HTML list, table and forms, the forms with menu working radio button, check box, text box, etc.</p> <p>Evaluate the performance of techniques/tools used for developing interactive data oriented websites.</p>
7.	BCA0405(P)	Programming in Visual Basic Lab-VIII	<p>At the end of this Lab course students will be able to:</p> <ol style="list-style-type: none"> 1. Perform arithmetic operations in Console Application. 2. Prepare forms for various applications. 3. Create various web applications. 4. Prepare form for preparing student mark list. 5. Develop web application for login form. 6. Perform arithmetic operations in Console Application. 7. Develop VB.NET console program to solve problems using one dimensional arrays – (like average of n number, largest number, second largest etc.)

Fifth semester

Fifth semester			
Sr. No	Subject Code	Subject Name	Course outcome
1.	BCA0501	Operating System	Analyze the structure of OS and basic architectural components involved in OS design. Analyze and design the applications to run in parallel either using process or thread models of different OS. Analyze the various device and resource management techniques for timesharing or distributed systems. Understand the Mutual exclusion, Deadlock detection and agreement protocols of Distributed operating system. Interpret the mechanisms adopted for file sharing in distributed Applications. Conceptualize the components involved in designing a contemporary OS. Learn to analyze and design the applications to run in parallel either using process or thread models of different OS. Analyze the various device and resource management techniques for timesharing and distributed systems.
2.	BCA0502	ecommerce	Analyze the impact of E-commerce on business models and strategy. Describe the major types of E-commerce. Explain the process that should be followed in building an E-commerce presence. Identify the key security threats in the E-commerce environment.
3.	BCA0503	Management Information System	Upon completion of this course, students will be able to: <ol style="list-style-type: none"> 1. Relate the basic concepts and technologies used in the field of management information systems. 2. Compare the processes of developing and implementing information systems. 3. Outline the role of the ethical, social, and security issues of information systems. 4. Translate the role of information systems in organizations, the strategic management processes, with the implications for the management. 5. Apply the understanding of how various information systems like DBMS work together to accomplish the information objectives of an organization.
4.	BCA0504	ASP.net Technologies	Upon the completion of the course students will be able to

			<ul style="list-style-type: none"> • Students will be able to design web applications using ASP.NET • Students will be able to use ASP.NET controls in web applications • Students will be able to create database driven ASP.NET web applications and web services
5.	BCA0505	Computer Oriented Statistical Methods	
6.	BCA0504(P)	ASP.net Technologies Lab-IX	<p>At the end of this Lab course students will be able to:</p> <ol style="list-style-type: none"> 1.Create user interactive web pages using ASP.Net. 2. Performing Database operations for Windows Form and web applications. 3. Creating ASP.NET Web Forms. 4. Handling Events 5. User Interface with Server Controls 6. Validation Controls 7. Create a windows form with the following controls Textbox, Radio button, Check box, Command Button 8. Create a window form using HTML server controls.
7.	BCA0505(P)	Computer Oriented Statistical Methods Lab-X	

Sixth semester

Sr. No	Subject Code	Subject Name	Course outcome
1.	BCA0601	Computer Networks	To understand the basics of computer networks, models and services. To explain the transmission media and to apply the error detection and correction of data transmission. To analyze the importance and design issues of layers. To differentiate the services and protocols of various layers. To illustrate the types of security and digital signature.
2.	BCA0602	Numerical Methods	
3.	BCA0603	Multimedia Technology	<p>To Critically and analyze the key components of multimedia technologies including text, graphics, voice, video and animation and the broad principles associated with multimedia concepts used in computer graphics.</p> <ol style="list-style-type: none"> 1. Create vector and typographic designs and apply masking effect to images. 2. Design an image using image editing tools and apply effectively. 3. Create animated sequence with titles applying the principles of animation. 4. Apply acquired knowledge in the field of multimedia for the good cause like advertisement in practice and independently continue to expand knowledge in this field. 5. Create an animation using the tools panel.
4.	BCA0604	Computer Graphics	<p>Understand the basics of computer graphics, different graphics systems and applications of computer graphics.</p> <ol style="list-style-type: none"> 1. Discuss various algorithms for scan conversion and filling of basic objects and their comparative analysis. 2. Use of geometric transformations on graphics objects and their application in composite form. 3. Extract scene with different clipping methods and its transformation to graphics display device. 4. Explore projections and visible surface detection techniques for display of 3D scene on 2D screen. 5. Render projected objects to naturalize the scene in 2D view and use of illumination models for this.
5.	BCA0605	Software Engineering	<p>After the completion of the course, Students will be able to:</p> <ol style="list-style-type: none"> 1. Students will be able to model the structure and

			<p>behavior a software system using E-R diagrams.</p> <p>2. Students will apply software testing and quality assurance techniques at the module level, and understand these techniques at the system and organization level.</p> <p>3. Students will be able to understand common lifecycle processes including waterfall (linear), prototyping, spiral approaches.</p> <p>4. Student will have a working knowledge of technical documentations and make presentations on various aspects of a software development project, including the technical aspects (architecture, design, quality assurance) as well as the managerial aspects (planning, scheduling, and delivery).</p> <p>5. Students will introduced to design a solution to a given problem using one or more design patterns and implement the design in a programming language.</p>
6.	BCA0604(P)	Computer Graphics Lab-XI	<p>At the end of this Lab course students will be able to:</p> <p>1. Understand the basic concepts of computer graphics.</p> <p>2. Design scan conversion problems using C-programming.</p> <p>3. Apply clipping and filling techniques for modifying an object.</p> <p>4. Understand the concepts of different type of geometric transformation of objects in 2D and 3D.</p> <p>5. Understand the practical implementation of modeling, rendering, viewing of objects in 2D.</p>
7.	BCA0605(P)	Major Project	<p>a) Students should be able to design and construct a hardware and software system, component, or process to meet desired needs.</p> <p>b) Students are provided to work on multidisciplinary Problems.</p> <p>c) Students should be able to work as professionals, with portfolio ranging from data management, network configuration, designing hardware, database and software design to management and administration of entire systems</p>