



PROGRAMME, PROGRAMME SPECIFIC & COURSE OUTCOMES 2016-17

B. C. A (Bachelor of Computer Applications)

Programme Outcomes (PO)

1. Enabled students to develop problem-solving competence while using the computer.
2. Empowered the students in skills and analytical abilities in computer-based solutions
3. Inculcated various software development practices.
4. Developed awareness about automation.
5. Trained students in professional skills.
6. Trained the students in the necessary skill for a computer application career.

Programme Specific Outcomes (PSO)

1. Produced knowledgeable and skilled human resources which employable in IT sectors.
2. Imparted knowledge required for planning, designing, and building Application Software Systems.
3. Supported automated systems applications.
4. Produced entrepreneurs who developed customized solutions for small and Medium Enterprises.

Course Outcomes (CO)

S.NO	SEM	NAME OF THE COURSE	OUTCOMES
1	I	Programming in COBOL	<ul style="list-style-type: none">• Format of coding and structure of COBOL programs with types of divisions and group data items.• Understand divisions in the COBOL program, Level Structure, Procedure Division, and Input-Output and

			<ul style="list-style-type: none"> Compilation and execution of COBOL program. Understand designing of program, Structured Programming, Data manipulation, and table handling. Understand handling of File using COBOL program and different operations related to file handling.
2		Practical - I : COBOL	<ul style="list-style-type: none"> Creation of COBOL programs. Error recovery and execution of COBOL programs. Testing of programs and tuning run-time environment and storage management.
3		Programming in C	<ul style="list-style-type: none"> Analyze a computational problem and develop an algorithm/flowchart to find its solution. Develop readable* C programs with branching and looping statements, which use Arithmetic, Logical, Relational or Bitwise operators. Divide a given computational problem into a number of modules and develop a readable multi-function C program by using recursion if required to find the solution to the computational problem..
4	II	Practical – II: C	<ul style="list-style-type: none"> Write readable C programs with arrays, structure, or union for storing the data to be processed. Write readable C programs which use pointers for array processing and parameter passing. Develop readable C programs with files for reading input and storing output.
5		SBEC – I : Basics of Internet	<ul style="list-style-type: none"> Understand the basic concepts and the usage of the internet, mail creation, online job applications, resume preparation, social networks, etc. Use modern scientific tools and apply computer skills for creating innovative products. Utilize computer knowledge in the field of global, economic, and societal context for sustainable development.
6	III	Data Structures and Algorithms	<ul style="list-style-type: none"> To design and implementation of basic and advanced data structures. To introduce various techniques for the

			<p>representation of the data in the real world.</p> <ul style="list-style-type: none"> • To develop an application using data structures such as linked lists, stacks, queues, and trees to solve the problems. • Understand and implement fundamental algorithms like searching and sorting in various real-time applications.
7		Programming in C++	<ul style="list-style-type: none"> • Compare OOPS with other programming techniques. • Implement C++ programs with constructors and destructors. • Develop OOP involving polymorphism using operator overloading and method overloading. • Implement programs with code reusability using inheritance. • Develop Programs with file handling and templates.
8		Software Engineering Structures and Algorithms	<ul style="list-style-type: none"> • Understand different software process models. • Identify software requirements engineering activities. • Develop the skills necessary for software design. • Assimilate the knowledge of software testing strategies. • Enumerate different software estimation and project scheduling techniques.
9		Practical - III : C++	<ul style="list-style-type: none"> • Implement Classes and Objects, • Constructors and Destructors with an array of Objects. • Implement Passing and returning parameters as objects by reference. • Demonstrate function overloading, friend functions, and friend classes. • Implement different types of inheritances like Multiple, Multilevel, and Hybrid.
10	IV	Relational Database Management Systems	<ul style="list-style-type: none"> • List the different issues involved in the design and implementation of a database system. • Give a Study report on the physical and logical database designs, database modeling, relational model. • Use data manipulation language to query, update, and manage a database.

			<ul style="list-style-type: none"> • Understand and database normalization concepts and design a normalized database. • Understand programming in PL/SQL.
11		Linux and Shell Programming	<ul style="list-style-type: none"> • To provide a comprehensive introduction to Basic Linux Shell Programming Logic. • To Understand the basic operating concepts, command-line usage, shell programming, the C language, programming development tools, system programming, network programming, and GUI programming.
12		Operating Systems	<ul style="list-style-type: none"> • Learn operating system structures and processor management. • Familiarize inter-process synchronization in operating systems. • Familiarize concepts of memory management that include virtual memory. • Master concepts of file system implementation and risk management.
13		Practical – IV : Linux	<ul style="list-style-type: none"> • Familiarize with Linux, its commands, and utilities. • Implement and test various commands in Linux OS. • To enhance the students to develop simple and complex shell scripts.
14		SBEC – II : Exploring on Word	<ul style="list-style-type: none"> • Able to create a new Word document, Save a file in Word. • Able to reorganize text within a paragraph, make text italic, bold, or underlined. • Able to change the size, font, and color of text, alignment of text, line spacing of the text. • Understand the creation and formatting of numbered and unnumbered lists. • Learn inserting text into header and footer, spelling, and grammar errors. • Able to create, edit and format a table, insert images, hyperlink and watermark.
15	V	Programming in Java	<ul style="list-style-type: none"> • Understand the concept of OOPs as well as the purpose and usage principles of Inheritance, polymorphism, encapsulation, etc • Understand the basic concepts of classes and objects JVM Concept, Data types, and Operators.

		<ul style="list-style-type: none"> • Understand Internet Programming Using Java Applets. • Make use of an array, constructors, Inheritance, Packages, and Interfaces
16	Computer Networks	<ul style="list-style-type: none"> • Understand the basic concept of Data communication. • Understand the concept of OSI Layers. • Learn different protocols in all layers. • Understand the concept of security in networks.
17	Computer Graphics	<ul style="list-style-type: none"> • Describe the core concepts of computer graphics. • Demonstrate the 2D transformation concepts. • Demonstrate the 3D transformation concepts. • Describe the 3D object representation using primitives structures, curve structures, etc. • Explain the various illumination models.
18	Elective – I: Multimedia Systems	<ul style="list-style-type: none"> • To recognize fundamental principles of multimedia, including digitization and data compression for non-textual information • To understand core multimedia technologies and standards. • To understand the image, sound, and video editing. • To design, capture, store and integrate sound, images, and video to deliver multimodal information.
19	Practical – V : Java	<ul style="list-style-type: none"> • Analyze and design Java programs using object-oriented principles. • Apply basics of event programming string handling functions. • Implement the concepts of classes, loops, conditions. • Implement the concept of constructors, Inheritance. Develop simple GUI interfaces with event handling capabilities. • Develop and debug java programs using an IDE.
20	SBEC III : Excel and PowerPoint	<ul style="list-style-type: none"> • Able to create a new excel file, add data to a table, apply table and cell styles, change cell format. • Able to add, delete, and move columns and rows, change the width of columns and rows,

			<p>use Flash Fill.</p> <ul style="list-style-type: none"> • Able to use AutoSum option and other functions and formulas in excel. • Able to sort and filter data in a table. • Understand to create charts and graphs. • Able to create and save a new presentation, add images and clip art, create and insert SmartArt. • Understand to add videos and arrange objects. • Learn to change the theme on presentation, change slide transition, and animation effects. • Able to create charts and graphs in PowerPoint presentations.
21		SBEC IV : Java Script	<ul style="list-style-type: none"> • Able to describe and utilize JavaScript programming concepts such as variables, arrays, conditionals, and loops. • Able to write and deploy JavaScript code to solve practical web design problems. • Understand JavaScript frameworks and write custom JavaScript code. • Able to describe the general landscape of current web technologies and how they can utilize to solve real-life web development problems.
22	VI	Visual Programming	<ul style="list-style-type: none"> • To introduce the concepts of visual and GUI programming using Microsoft foundation classes. • To enable the students to develop programs and simple applications using Visual C++.
23		PHP Scripting Language	<ul style="list-style-type: none"> • On the Success of completion of the courses the students are able to understand the features such as functions, forms in PHP, Files handling, OOPs concepts, Cookies, Sessions, and Database, and draw images on the server with AJAX.
24		Elective – II: E-Commerce	<ul style="list-style-type: none"> • To define E-Commerce, Types, and components. To explain Electronic Data Interchange and Workflow automation. • To define Network Firewall Security and Client-server Security. • To explain Consumer-Oriented Application and mercantile Oriented Application. • To define electronic payment systems and smart

			cards and Credit Card.
25		Elective – III: Data mining & Warehousing	<ul style="list-style-type: none"> • Understand operational database, Data warehousing, the need for a database to meet industrial needs. • Identify the components in typical Data warehouse Architecture and understand the multidimensional schemas for the data warehouse. • Understand the knowledge about data mining, decision tree, generic algorithms, and the Fuzzy set approach. • To introduce the knowledge about data mining and clustering methods.
26		Practical - VI : VB Programming and PHP & MYSQL	<ul style="list-style-type: none"> • Implement GUI-based applications using Visual Basic. • Acquired skills to write PHP programs. • Create a database in MYSQL and manipulate data into it. • Develop PHP applications using MYSQL as backend
27		SBEC V: Soft Skills	<ul style="list-style-type: none"> • Effectively communicate through verbal/oral communication and 210249 improve the listening skills. • Write precise briefs or reports and technical documents. • Actively participate in group discussion / meetings / interviews and prepare & deliver presentations. • Become a more effective individual through goal/target setting, self-motivation, and practicing creative thinking.
28		SBEC VI : VBScript	<ul style="list-style-type: none"> • Able to embed VBScript code in an HTML document. • Able to use VBScript operators and variables. • Able to write code that makes decisions based on existing conditions, using control structures and loops. • Enabling the communication with a Web page visitor using Message and Input boxes.