

**Course Name: B.C.A**

**Course Code: U09**

**Program Specific Outcome (PSO)**

**PSO1:** To know latest trends in technology development and thereby innovate new ideas, and solutions to existing problems.

**PSO2:** To prepare students to get successful career in software industry, public sector undertakings, government, corporate sector, research and other areas where the computer application are deployed.

**PSO3:** To pursue higher studies can opt for MBA, MCA, M.Sc

**Program Outcome (PO)**

**PO1:** To provide students, a foundation in fundamentals of computer, problem solving, communication and leadership skills.

**PO2:** To educate students in computer science & IT with emphasis on practical training in Software development.

**PO3:** Teach the ability to analyze, identify, formulate and develop computer applications using modern computing tools and techniques.

**PO4:** Ability to acquire knowledge of mathematical Foundation, Financial and management.

**PO5:** To understand, analyze and develop computer programs in the areas related to algorithm, web design and networking for efficient design of computer based system.

**PO6:** To exhibit clarity on both conceptual and application-oriented skills of computing in diverse field, and programming skills for higher studies.

## COURSE OUTCOMES - 2020-2021

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S. No:	Course Code	Course Title	Outcomes
<b>SEMESTER-1</b>			
1.	<b>CCA 11</b>	<b>Programming in C</b>	<ul style="list-style-type: none"> <li>• The Student will be able to understand the concepts of Constants, Variables, and Data Types, Operators and Expressions</li> <li>• The Student will be able to understand the concepts of Managing Input and Output Operations, Decision Making and Branching, Decision Making and Looping.</li> <li>• The Student will be able to understand the concepts of Arrays, Character Arrays and Strings, User Defined Functions.</li> <li>• The Student will be able to understand the concepts of Structure and Unions, Pointers, File Management in C.</li> <li>• The Student will be able to understand the concepts of Fundamental Algorithms, Factoring Methods.</li> </ul>
2.	<b>CPCA 13</b>	<b>Programming in C Lab</b>	<ul style="list-style-type: none"> <li>• Enhance the analyzing and problem solving skills and use the same for writing programs in C.</li> <li>• Write diversified solutions, draw flowcharts and develop a well-documented and indented program according to coding standards.</li> <li>• Learn to debug a given program and execute the C program.</li> <li>• To have enough practice the use of conditional and looping statements.</li> <li>• To implement arrays, functions and pointers.</li> </ul>
3.	<b>CPE 10C</b>	<b>Professional English I</b>	<ul style="list-style-type: none"> <li>• Students will be enabled to understand the basic objective of the course by being acquainted with specific dimensions of communication skills i.e. Reading, Writing, Listening, Thinking and Speaking.</li> <li>• Students will apply it for practical and oral presentation purposes by being honed up in presentation skills and voice-dynamics.</li> <li>• Students would be able to create substantial base by the formation of strong professional vocabulary for its application at different platforms and through numerous modes as Comprehension, reading, writing and speaking etc.</li> </ul>
4.	<b>CAMA 15B</b>	<b>Mathematical Foundation I</b>	<ul style="list-style-type: none"> <li>• To know about Logical operators, validity of arguments, set theory and set operations, relations and functions, Binary operations, Binary algebra, Permutations &amp; Combinations, Differentiation, Straight lines, pair of straight lines, Circles, Parabola, Ellipse, Hyperbola.</li> </ul>
<b>SEMESTER-2</b>			
5.	<b>CCA 21</b>	<b>C++ and Data Structure</b>	<ul style="list-style-type: none"> <li>• The Student will be able to understand the concepts of object oriented programming. Apply structure and inline functions.</li> <li>• The Student will be able to understand the concepts of the types of inheritances and Applying various levels of Inheritance for real time problems apply the OOPs concepts class and object. Understand Explain the file concept and exception handlings in C++</li> <li>• The Student will be able to understand the concepts of Stacks and Queue using array and pointers.</li> <li>• The Student will be able to understand the concepts of Recursion, Binary Search Tree and graphs.</li> <li>• The Student will be able to understand the concepts of Sorting and Searching Algorithms.</li> </ul>

6.	<b>CPCA 23</b>	<b>C++ and Data Structure Lab</b>	<ul style="list-style-type: none"> <li>Understand the Creating and Deleting the Objects with the Concepts of Constructors and Destructors.</li> <li>Demonstrate the Polymorphism Concepts and Operator Overloading.</li> <li>Understand basic Data Structures such as Arrays, Linked Lists, Stacks, Queues, Doubly Linked List and Infix to Postfix Conversion.</li> <li>Apply Algorithm for solving problems like Sorting and Searching.</li> <li>Apply Algorithms and use Graphs and Trees as tools to visualize and simplify Problems</li> </ul>
7.	<b>CPE 20C</b>	<b>Professional English II</b>	<ul style="list-style-type: none"> <li>Students will apply it at their work place for writing purposes such as Presentation/official drafting/administrative communication and use it for document/project/report/research paper writing.</li> <li>Students will be made to evaluate the correct &amp; error-free writing by being well-versed in rules of English grammar &amp; cultivate relevant technical style of communication &amp; presentation at their work place &amp; also for academic uses.</li> <li>Students will apply techniques for developing inter-personal communication skills and positive attitude leading to their professional competence.</li> </ul>
8.	<b>CAMA 25B</b>	<b>Mathematical Foundation II</b>	<ul style="list-style-type: none"> <li>To know about Matrix Operations, Symmetric, Skew-Symmetric, Hermitian, Skew-Hermitian, Orthogonal, Unitary Matrices. Rank of a Matrix Solutions of linear equations Consistency and Inconsistency, Characteristic roots and Characteristics Vectors, Cayley - Hamilton Theorem, Integration of rational functions, Integration by parts, Reduction formulae, Area and volume using integration, Planes, Straight lines, Spheres, Curves, Cylinders.</li> </ul>

### SEMESTER-3

5.	<b>BCA31</b>	<b>Java programming</b>	<ul style="list-style-type: none"> <li>To implement Object oriented designs using java</li> <li>Learn to design a graphical user interface (GUI) with java swing API</li> <li>Learn how to design applications with threads in java</li> </ul>
6.	<b>BCA32</b>	<b>E-Commerce</b>	<ul style="list-style-type: none"> <li>Basics of E-commerce</li> <li>Practices on E-payment and Digital Money</li> </ul>
7.	<b>BCA33</b>	<b>Resource Management techniques</b>	<ul style="list-style-type: none"> <li>Learn to solve problems in transportation and industries with machines</li> <li>To develop computational skill and logical thinking in formulating industry-oriented problems as a mathematical problem and finding solutions</li> </ul>
8.	<b>BACM15 C</b>	<b>Financial Accounting I</b>	<ul style="list-style-type: none"> <li>To gain basic knowledge of accounting</li> <li>To understand the system of Financial accounting</li> </ul>
9.	<b>BPCA36</b>	<b>Java Programming Lab</b>	<ul style="list-style-type: none"> <li>How to take the statement of a business problem and able to find the logic for solving the problem</li> <li>Use java APIs for program development</li> </ul>
10.	<b>BSCA34</b>	<b>Design and Analysis of Algorithm</b>	<ul style="list-style-type: none"> <li>To build a solid foundation in algorithmic techniques</li> <li>Develop creating thinking in algorithms design and mathematical acumen and programming skills</li> </ul>

### SEMESTER-4

11.	<b>BCA41</b>	<b>Database management systems</b>	<ul style="list-style-type: none"> <li>To incorporate strong knowledge on database</li> <li>Understanding of the architecture and functioning of database management systems as well as associated tools and techniques, principles of data modelling using entity relationship and develop a good database design and normalization techniques to normalize a database.</li> <li>Understand the use of structured query language</li> </ul>
12.	<b>BCA42</b>	<b>Enterprise resource planning</b>	<ul style="list-style-type: none"> <li>To learn fundamental concepts and technologies related to ERP</li> <li>Understand ERP in an CRM, HR and Financial Perspectives</li> <li>At the end of the course, students familiar to use ERP in different business organizations by having latest scenario of ERP market in e-business</li> </ul>
13.	<b>BCA43</b>	<b>Decision support system</b>	<ul style="list-style-type: none"> <li>To Analysis, design and implementation of DSS</li> <li>Ability to identify and select appropriate decision support systems for generating innovative business solutions</li> </ul>
14.	<b>BACM25</b>	<b>Financial</b>	<ul style="list-style-type: none"> <li>To learn the process of Financial accounting</li> </ul>

	<b>C</b>	<b>Accounting II</b>	<ul style="list-style-type: none"> <li>To understand the fundamentals and reconstitution of partnership</li> <li>To find out financial position of the business</li> </ul>
15.	<b>BPCA46</b>	<b>RDBMS Lab</b>	<ul style="list-style-type: none"> <li>Design database and perform SQL queries</li> </ul>
<b>SEMESTER-5</b>			
16.	<b>BCA 51</b>	<b>Mobile Application Development</b>	<ul style="list-style-type: none"> <li>This course aims to provide the students with a detailed knowledge on Mobile Application and Development and covers Android programming from fundamentals to building mobile applications for smart gadgets.</li> </ul>
17.	<b>BCA 52</b>	<b>Operating System</b>	<ul style="list-style-type: none"> <li>Enable the student to get sufficient knowledge on various system resources.</li> </ul>
18.	<b>BCA 53</b>	<b>Data Communication &amp; Networks</b>	<ul style="list-style-type: none"> <li>To equip students to basics of Data Communication and prepare them for better computer networking</li> </ul>
19.	<b>BECA 54A</b>	<b>Elective-I Data Mining</b>	<ul style="list-style-type: none"> <li>Enable the student to get sufficient knowledge on mining the data</li> </ul>
20.	<b>BECA 54B</b>	<b>Elective-I Computer Graphics</b>	<ul style="list-style-type: none"> <li>To equip students to basics of computer drawing and prepare them for computer modelling of objects</li> </ul>
21.	<b>BECA 54C</b>	<b>Elective-I Information Security</b>	<ul style="list-style-type: none"> <li>To enable the student to understand various methodology available for securing information</li> </ul>
22	<b>BSCA 55</b>	<b>Software Engineering</b>	<ul style="list-style-type: none"> <li>This course introduces the concepts and methods required for the construction of large software intensive systems.</li> </ul>
23	<b>BPCA 56</b>	<b>Mobile Application Development Lab</b>	<ul style="list-style-type: none"> <li>Understand the installation of Android Development Kit</li> <li>Design GUI for their simple applications</li> <li>Perform multiscreen applications</li> </ul>
24	<b>BPCA 57</b>	<b>Operating system Lab</b>	<ul style="list-style-type: none"> <li>Exposure to different OS</li> <li>Build 'C' program for process and file system management using system calls</li> <li>Choose the best CPU scheduling algorithm for a given problem instance</li> <li>Experiment with Unix commands and shell programming</li> </ul>
<b>SEMESTER 6</b>			
25	<b>BCA 61</b>	<b>Cloud Computing</b>	<ul style="list-style-type: none"> <li>To enable the students to learn the basic functions, principles and concepts of cloud Systems.</li> </ul>
26	<b>BCA 62</b>	<b>Open Source Programming</b>	<ul style="list-style-type: none"> <li>To discuss techniques that can be effectively applied in practice about HTML5, JavaScript, PHP , CSS and Linux</li> </ul>
27	<b>BECA 63A</b>	<b>Elective –II Software Testing</b>	<ul style="list-style-type: none"> <li>To make the student more proficient with error free software development.</li> </ul>
28	<b>BECA 63B</b>	<b>Elective –II Mobile Computing</b>	<ul style="list-style-type: none"> <li>To impart good knowledge of wireless communication to students</li> </ul>
29	<b>BECA 63C</b>	<b>Elective –II Microprocessors and its applications</b>	<ul style="list-style-type: none"> <li>To learn the architecture, programming, interfacing and rudiments of system design of microprocessors.</li> </ul>
30	<b>BECA 64A</b>	<b>Elective –III Internet of Things</b>	<ul style="list-style-type: none"> <li>To prepare the student for better application of internet technology.</li> </ul>
31	<b>BECA</b>	<b>Elective –III</b>	<ul style="list-style-type: none"> <li>To make the student to become more proficient with system programming</li> </ul>

	<b>64B</b>	<b>System Software</b>	
32	<b>BECA 64C</b>	<b>Elective –III Multimedia systems</b>	<ul style="list-style-type: none"> <li>• This course presents the Introduction to Multimedia, Images &amp; Animation and enables the students to learn the concepts of Multimedia.</li> </ul>
33	<b>BSCA 65</b>	<b>ASP.NET</b>	<ul style="list-style-type: none"> <li>• Students to become well aware of .NET technology</li> </ul>
34	<b>BPCA 66</b>	<b>Open Source Programming Lab</b>	<ul style="list-style-type: none"> <li>• Explore different open source technology like Linux, PHP &amp; MySQL with different packages.</li> <li>• Execute Linux commands for programming.</li> <li>• Execute programs of PHP with MySQL connection</li> </ul>
35	<b>BPCA 67</b>	<b>ASP.NET Lab</b>	<ul style="list-style-type: none"> <li>• Create and modify multi-page Web Form applications that involve and demonstrate features such as flow control, the use of style sheets, state management, data access, data binding, security, and data verification and validation.</li> <li>• Create and modify simple web services.</li> </ul>