BACHELOR OF COMPUTER APPLICATIONS

(B.C.A.)

Semester I	**BCA-22-101: Fundamentals of Mathematics**
Credit – 6	**LTP: 6:0:0**

Course Outcomes: On successful completion of the course the learner will be able to

COs	**Course Outcomes**	**Cognitive Levels**	**Blooms Taxonomy**
CO 1	Define and illustrate the concepts related to Mathematics	L –1 L –2	Remembering Understanding
CO 2	Make use of the knowledge of mathematics for examining various theorems	L – 3 L - 4	Applying Analyzing
CO 3	Determine the effectiveness of different theorems and construct effective solution for mathematical problems	L -5 L –6	Evaluating Creating

Semester I	**BCA-22–102: Emerging Information Technologies**
Credit – 6	**LTP: 6:0:0**

Course Outcomes: On successful completion of the course the learner will be able to

COs	**Course Outcomes**	**Cognitive Levels**	**Blooms Taxonomy**
CO 1	Learn fundamental concepts of Computer, Algorithm, Flowchart and Computer Software	L - 1 L - 2	Remembering Understanding
CO 2	Apply concepts of Computer Software to analyze working of Computer	L - 3 L - 4	Applying Analyzing
CO 3	Create different Algorithms and Flowcharts to evaluate functioning of Computer	L - 5 L - 6	Evaluating Creating

Semester I	BCA-22-103: Programming in C
Credit – 4	LTP: 4:0:0

Course Outcomes: On successful completion of the course the learner will be able to

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	Remember and understand the concepts of C Programming	L - 1 L - 2	Understanding Remembering
CO 2	Apply and analysis the real-world problems using C programming concepts	L - 3 L - 4	Applying Analyzing
CO 3	Build the solution of the real-world problems and evaluate it as per industry standards	L - 5 L - 6	Evaluating Creating

Semester I	BCA-22–103P: Programming in C Lab
Credit – 2	LTP: 0:0:2

Course Outcomes: On successful completion of the course the learner will be able to-

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	Memorise and outline the concepts of C Programming	L - 1 L - 2	Understanding Remembering
CO 2	Plan and analyse the real-world problems using C programming concepts	L - 3 L - 4	Applying Analyzing
CO 3	Create the solution of the real-world problems and improve it as per industry standards	L - 5 L - 6	Evaluating Creating

Semester I	BCA-ME-22-104: Management Principles
Credit – 4	LTP: 4:0:0

Course Outcomes: On successful completion of the course the learner will be able to

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	Comprehend the meaning and horizon of management principles and conceptualize the development of management thoughts	L – 1 L – 2	Remembering Understanding
CO 2	Analyze various management concepts and apply them to real-world management challenges	L – 3 L – 4	Applying Analyzing
CO 3	Evaluate various strategic frameworks and develop strategies to tackle real-world company challenges	L – 5 L – 6	Evaluating Creating

Semester I	BCA-ME-22-105: Intellectual Property Rights
Credit – 4	LTP: 4:0:0

Course Outcomes: On successful completion of the course the learner will be able to

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	Remember and understand the basic concept of Intellectual Property Rights	L – 1 L – 2	Remembering Understanding
CO 2	Analyze different aspect of Intellectual property right and apply these concepts within the organization	L – 3 L – 4	Applying Analyzing
CO 3	Evaluate different regulatory framework pertaining to IPR and create report for the organization accordingly	L – 5 L – 6	Evaluating Creating

Semester I	BCA-VC-22-106: Office Automation
Credit – 3	LTP: 0:0:3

Course Outcomes: On successful completion of the course the learner will be able to

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	Spell and Illustrate fundamental concepts of MS Office	L - 1 L - 2	Remembering Understanding
CO 2	Utilize and categorize basic features of MS Office	L - 3 L - 4	Applying Analyzing
CO 3	Select and Create word document, Spreadsheet and presentation using MS office	L - 5 L - 6	Evaluating Creating

Programme: B.C.A.	Year: First	Semester: First
Subject: Computer Applications		
Course Code: CC-1	Course Title: Food, Nutrition and Hygiene	

Course Objective: The objective of this course is to learn the basic concept of the Food and Nutrition, nutritive requirement during special conditions, meal planning, Nutrition Concept, common health issues in the society and special requirement of food during common illnesses.

Course Outcomes: On successful completion of the course the learner will be able to-

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	Remember and understand the concepts related to food and nutrition.	L – 1 L – 2	Remembering Understanding
CO 2	Apply principles of nutritive requirement during normal and special conditions and analyse related health issues.	L – 3 L – 4	Applying Analyzing
CO 3	Evaluate the system of meal planning and create effective plans and strategies towards Nutrition requirements.	L – 5 L – 6	Evaluating Creating

Semester II	BCA-22-201: Digital Electronics & Computer Organization
Credit- 6	LTP: 6:0:0

Course Outcomes: On successful completion of the course the learner will be able to

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	Remember and understand Gates and their operations are performed by computers	L - 1 L - 2	Remembering Understanding
CO 2	Apply and analyze operations of Combinational and Sequential circuit	L -3 L - 4	Applying Analyzing
CO 3	Evaluate various types of memory, its applications and operation of Memory Organization	L -5 L- 6	Evaluating Creating

Semester II	BCA-22-202: Operating Systems
Credit- 6	LTP: 6:0:0

Course Outcomes: On successful completion of the course the learner will be able to

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	Understand fundamental operating system abstractions such as processes, threads, files, semaphores, shared memory regions, etc.	L –1 L –2	Remembering Understanding
CO 2	Analyze important algorithms for process scheduling and memory management	L –3 L –4	Applying Analyzing
CO 3	Categorize the operating system's resource management techniques, dead lock management techniques, memory management techniques	L –5 L - 6	Evaluating Creating

Semester II	BCA-22– 203: Data Structures Using C
Credit – 4	LTP: 4:0:0

Course Outcomes: On successful completion of the course the learner will be able to

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	List down and extend the concepts related to Data Structures	L –1 L –2	Remembering Understanding
CO 2	Choose the knowledge of data structures to inspect various programme	L – 3 L - 4	Applying Analyzing
CO 3	Evaluate the effectiveness of types of data structures and create effective solutions for data structure programme	L -5 L –6	Evaluating Creating

Semester II	BCA-22– 203P: Data Structure Using C Lab
Credit – 2	LTP: 0:0:2

Course Outcomes: On successful completion of the course the learner will be able to-

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	Remember and understand the concepts related to Data Structures	L –1 L –2	Remembering Understanding
CO 2	Apply the knowledge of data structures to analyze various programme	L – 3 L - 4	Applying Analyzing
CO 3	Evaluate the effectiveness of types of data structures and create effective solutions for data structure programme	L -5 L –6	Evaluating Creating

Semester II	BCA-ME-22-204: Statistical Methods
Credit – 4	LTP: 4:0:0

Course Outcomes: On successful completion of the course the learner will be able to:

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	Define and illustrate the basic concepts of statistics	L – 1 L – 2	Remembering Understanding
CO 2	Apply the knowledge of statistics for solving various problems and analyze/interpret the intricacies involved in decision making based on statistics	L – 3 L – 4	Applying Analyzing
CO 3	Evaluate the effectiveness of statistics in particular situations and create effective decision criteria on the basis of information	L – 5 L – 6	Evaluating Creating

Semester -- II	BCA-ME-22-205: Entrepreneurship & Innovation
Credit– 4	LTP : 4:0:0

Course Outcomes: On successful completion of the course the learner will be able to

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	Remember and understand different dimensions of Entrepreneurship, Innovation , Incubation & Design Thinking for Startups	L –1 L -2	Remembering Understanding
CO 2	Analyze and apply the dimensions of Entrepreneurship, Innovation , Incubation & Design Thinking in changing situations	L –3 L –4	Applying Analyzing
CO 3	Evaluate different aspects and updates in the current Entrepreneurship, Innovation , Incubation & Design Thinking Ecosystem and create a startup plan	L -5 L -6	Evaluating Creating

Semester II	BCA-VC-22-206: Business Analytics
Credit – 3	LTP: 0:0:3

Course Outcomes: On successful completion of the course the learner will be able to-

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	Remember and understand the concepts related to Business Analytics and R Programming Environment.	L - 1 L - 2	Remembering Understanding
CO 2	Apply fundamentals of business analytics using R and R Studio & analyze real-time business data.	L - 3 L - 4	Applying Analyzing
CO 3	Evaluate real-time business data and create suitable visualizations charts to draw inferences to facilitate managerial decision-making.	L - 5 L - 6	Evaluating Creating

Programme: B.C.A.	Year: First	Semester: Second
Subject: Computer Applications		
Course Code: CC-2	Course Title: First Aid and Health	

Course Outcomes: On successful completion of the course the learner will be able to-

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	Remember and understand the concepts related to first aid and health.	L – 1 L – 2	Remembering Understanding
CO 2	Apply principles of first aid and health and analyze first aid principles as applied to real life.	L – 3 L – 4	Applying Analyzing
CO 3	Evaluate the first aid systems as applicable to general and emergency situations and create effective first aid procedures to deal with exigencies.	L – 5 L – 6	Evaluating Creating

Semester III	BCA-22-301: Computer Networks
Credit-6	LTP: 6:0:0

Course Outcomes: On successful completion of the course learner will be able to

COs	Course Outcomes	Cognitive Levels	Bloom Taxonomy
CO 1	Remember and understand the concepts related to Computer Network	L – 1 L – 2	Remembering Understanding
CO 2	Apply the knowledge of Computer Network to analyze various protocols	L – 3 L – 4	Applying Analyzing
CO 3	Evaluate the effectiveness of layer design and create effective solutions for network related issues	L – 5 L – 6	Evaluating Creating

Semester III	BCA-22-302: Discrete Mathematics
Credit – 6	LTP: 6:0:0

Course Outcomes: On successful completion of the course the learner will be able to

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	Remember and understand the concepts related to Discrete mathematics	L –1 L -2	Remembering Understanding
CO 2	Apply the knowledge of Discrete Mathematics to analyze various problems	L –3 L –4	Applying Analyzing
CO 3	Evaluate the effectiveness of algebraic structure and create effective solutions for mathematical issues	L –5 L - 6	Evaluating Creating

Semester III	BCA-22-303: Object-Oriented Programming Using C++
Credit – 4	LTP: 4:0:0

Course Outcomes: On successful completion of the course the learner will be able to:

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	Understand the difference between the top-down and bottom-up approach and remember the concepts of object-oriented programming	L - 1 L - 2	Understanding Remembering
CO 2	Using Object oriented concept in C++, apply & analyze real-world problems	L - 3 L – 4	Applying Analyzing
CO 3	Deliver/create the solution of real problems using C++ concepts	L - 5 L - 6	Evaluating Creating

Semester III	BCA-22-303P: Object-Oriented Programming Using C++ Lab
Credit – 2	LTP: 0:0:2

Course Outcomes: On successful completion of the course the learner will be able to

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	Conceptualize the difference between the top-down and bottom-up approach and remember the concepts of object-oriented programming	L - 1 L - 2	Understanding Remembering
CO 2	Apply and analyze the real-world problems using Object oriented concept in C++	L - 3 L – 4	Applying Analyzing
CO 3	Deliver/create the solution of real problems using concepts of C++	L - 5 L - 6	Evaluating Creating

Semester III	BCA-ME-22-304: Basics of Accounting and Finance
Credit – 4	LTP: 4:0:0

Course Outcomes: On successful completion of the course the learner will be able to:

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	Get well-versed with the accounting concepts, standards and products of financial market.	L –1 L –2	Remembering Understanding
CO 2	Apply the knowledge of accounting and financial products in analyzing the financial decisions of an enterprise.	L – 3 L – 4	Applying Analyzing
CO 3	Evaluate the financial market situations to create the appropriate investment strategies for the organization.	L – 5 L – 6	Evaluating Creating

Semester III	BCA-ME-22- 305: E-Commerce
Credit -4	LTP: 4:0:0

Course Outcomes: On successful completion of the course learner will be able to

COs	Course Outcomes	Cognitive Levels	Bloom Taxonomy
CO 1	Remember and understand the concepts to E-Commerce and related technologies	L-1 L-2	Remembering Understanding
CO 2	Apply the knowledge of E-Commerce technologies for online business and analyze the concept involved in online business	L-3 L-4	Applying Analyzing
CO 3	Evaluate the effectiveness of E-commerce practices in business and create a digital environment for business world	L-5 L-6	Evaluating Creating

Semester III	BCA-VC-22-306: Web Design
Credit – 3	LTP: 0:0:3

Course Outcomes: On successful completion of the course the learner will be able to

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	Recall and demonstrate the basics of web development framework	L - 1 L - 2	Remembering Understanding
CO 2	Build and classify the fundamental concepts of HTML, CSS, JS, PHP in website development	L - 3 L - 4	Applying Analyzing
CO 3	Recommend the various parameters required for designing websites	L - 5 L - 6	Evaluating Creating

Programme: B.C.A.	Year: Second	Semester: Third
Subject: Computer Applications		
Course Code: CC-3	Course Title: Human Values and Environmental Studies	

Course Outcomes: On successful completion of the course the learner will be able to-

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	Remember and understand basic principles of Human Values and Environmental Studies.	L – 1 L – 2	Remembering Understanding
CO 2	Apply core concepts of human values and business ethics and analyze how it works in organizational environment.	L – 3 L – 4	Applying Analyzing
CO 3	Evaluate applicability of human value issues in organizations and create a model of human value for implementation in organizations.	L – 5 L – 6	Evaluating Creating

Semester IV	BCA- 22-401 : Design and Analysis of Algorithms
Credit-6	LTP: 6:0:0

Course Outcomes: On successful completion of the course the learner will be able to

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	Remember and understand the concepts related to algorithm	L –1 L –2	Remembering Understanding
CO 2	Apply the knowledge of algorithm to analyze various source code	L – 3 L - 4	Applying Analyzing
CO 3	Evaluate the effectiveness of algorithm and create effective solutions for source code	L -5 L –6	Evaluating Creating

Semester IV	BCA- 22-402: Management Information Systems
Credit-6	LTP: 6:0:0

Course Outcomes: On successful completion of the course the learner will be able to

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	Remember and understand and concepts and tools related to the MIS	L - 1 L - 2	Remembering Understanding
CO 2	Apply the knowledge of MIS to enhance business effectiveness and analyze the different perspectives of MIS in organisational set-up	L -3 L - 4	Applying Analyzing
CO 3	Evaluate the relevance and role of MIS in different spheres of business and create information system to facilitate the decision making process	L-5 L-6	Evaluating Creating

Semester IV	BCA- 22-403: Database Management System
Credit-4	LTP: 4:0:0

Course Outcomes: On successful completion of the course the learner will be able to

COs	Course Outcomes:	Cognitive Levels	Blooms Taxonomy
CO 1	Recall and Outline the basic principles of DBMS and Logical Diagram for small databases	L –1 L -2	Remembering Understanding
CO 2	Choose the concept of DBMS to Database Recovery and Inspect the Database Processes	L –3 L –4	Applying Analyzing
CO 3	Evaluate Query and Build Database using basic commands of MySQL	L –5 L - 6	Evaluating Creating

Semester IV	BCA-22- 403P: Database Management System Lab
Credit-2	LTP: 0:0:2

Course Outcomes: On successful completion of the course the learner will be able to-

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	Define and Explain the basic concepts of database technologies	L –1 L -2	Remembering Understanding
CO 2	Apply and analyze database schema for a given problem-domain	L –3 L –4	Applying Analyzing
CO 3	Assess the querying of a database using SQL DML/DDL commands and construct integrity constraints	L –5 L - 6	Evaluating Creating

Semester IV	BCA-ME-22-404: Organisational Behavior
Credit- 4	LTP 4:0:0

Course Outcomes: After completing the course, the student shall be able to:

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	Remember and Summarise the concept of Organizational Behavior	L – 1 L – 2	Remember Understand
CO 2	Utilise and Discover different Personal attributes of Organizational Behavior based on Attitude, Perception and Learning	L – 3 L – 4	Applying Analyzing
CO 3	Evaluate and different theories and create best practices to be followed in an organization	L – 5 L – 6	Evaluating Creating

Semester IV	BCA-ME-22-405: Business Economics
Credit– 4	LTP: 4:0:0

Course Outcomes: On successful completion of the course the learner will be able to

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	Remember and understand the relevance of economics for a business firm	L – 1 L – 2	Remembering Understanding
CO 2	Analyze the different laws of economics and apply them in various changing situations in industry	L – 3 L – 4	Applying Analyzing
CO 3	Evaluate the different market structures leading towards creation of a business and economy as a whole	L – 5 L – 6	Evaluating Creating

Semester IV	BCA-VC-22-406: Digital Marketing
Credit – 3	LTP: 0:0:3

Course Outcomes: On successful completion of the course the learner will be able to

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	Remember and understand the concepts related to digital marketing	L - 1 L - 2	Remembering Understanding
CO 2	Apply the knowledge of digital marketing to solve related marketing problems and analyze the intricacies involved in digital marketing.	L - 3 L - 4	Applying Analyzing
CO 3	Evaluate the effectiveness of alternatives available for digital marketing in particular marketing situations and create effective digital marketing plan and strategy.	L - 5 L - 6	Evaluating Creating

Programme: B.C.A.	Year: Third	Semester: Fourth
Subject: Computer Applications		
Course Code: CC-4	Course Title: Physical Education and Yoga	

Course Outcomes: On successful completion of the course the learner will be able to-

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	Remember and understand the concepts related to Physical Education and Yoga.	L – 1 L – 2	Remembering Understanding
CO 2	Apply the knowledge of Physical Education and Yoga to self and analyze the intricacies involved in application of Physical Education and Yoga.	L – 3 L – 4	Applying Analyzing
CO 3	Evaluate the effectiveness of Physical Education and Yoga programs and create effective Physical Education and Yoga schedules.	L – 5 L – 6	Evaluating Creating

Semester V	BCA-22-501: Software Engineering
Credit-5	LTP: 5:0:0

Course Outcomes: On Successful completion of the course the learner will be able to

COs	Course Outcome	Cognitive Levels	Blooms Taxonomy
CO 1	Remember and understand the concepts related to Software engineering	L-1 L-2	Remembering Understanding
CO 2	Apply the knowledge of SDLC and Analyze a problem for Requirement Engineering Process	L-3 L-4	Applying Analyzing
CO 3	Evaluate the correctness and readability of software and Create Software design with specification documentation	L-5 L-6	Evaluating Creating

Semester V	BCA-22 -502: Optimization Techniques
Credit-5	LTP: 5:0:0

Course Outcomes: On successful completion of the course the learner will be able to

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	Conceptualize the role of Optimization techniques and relate different techniques of optimization	L –1 L -2	Remembering Understanding
CO 2	Choose different optimization techniques in solving various problems and inspect the optimal solution	L –3 L –4	Applying Analyzing
CO 3	Determine the real-world problems and formulate optimal solution using different Optimization techniques	L –5 L - 6	Evaluating Creating

Semester V	BCA-22-503: Fundamentals of Artificial Intelligence
Credit – 4	LTP: 4:0:0

Course Outcomes: On successful completion of the course the learner will be able to

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	Understand fundamentals of Artificial Intelligence and Machine Learning	L - 1 L - 2	Remembering Understanding
CO 2	Use various algorithms of Artificial Intelligence for simplification of problems	L - 3 L - 4	Applying Analyzing
CO 3	Evaluate functioning of different algorithms of Artificial Intelligence	L - 5 L - 6	Evaluating Creating

Semester V	BCA-22-504: Java Programming
Credit – 4	LTP: 4:0:0

Course Outcomes: On successful completion of the course the learner will be able to

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	Remember the Java Programming Concepts to understand the real problems	L - 1 L - 2	Understanding Remembering
CO 2	Apply and analyze the real-world problems using Java programming	L - 3 L - 4	Applying Analyzing
CO 3	Build the solution of real problems using Java Programming concepts and evaluate it	L - 5 L - 6	Evaluating Creating

Semester: V	BCA- 22-504P: Java Programming Lab
Credit – 2	LTP: 0:0:2

Course Outcomes: On successful completion of the course the learner will be able to

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	Remember the Java Programming Concepts to understand the real problems	L - 1 L - 2	Understanding Remembering
CO 2	Apply and analyze the real-world problems using Java programming	L - 3 L – 4	Applying Analyzing
CO 3	Create the solution of real problems using Java Programming concepts and evaluate it	L - 5 L - 6	Evaluating Creating

Semester V	BCA-IF-22-505: Project -ONE
Credit – 3	LTP: 0:0:3

Course Outcomes: On successful completion of the course the learner will be able to

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	Remember and understand the concepts related to software	L –1 L –2	Remembering Understanding
CO 2	Apply the knowledge of technical languages to analyze various programme	L – 3 L - 4	Applying Analyzing
CO 3	Evaluate the effectiveness of software and create effective solution for real-time technical problems	L -5 L –6	Evaluating Creating

Programme: B.C.A.	Year: Third	Semester: Fifth
Subject: Computer Applications		
Course Code: CC-5	Course Title: Analytical Ability and Digital Awareness	

Course Outcomes: On successful completion of the course the learner will be able to-

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	Remember and understand the concepts related to Analytical Ability and Digital Awareness	L – 1 L – 2	Remembering Understanding
CO 2	Apply the knowledge of Analytical Ability and Digital Awareness to solve business problems and analyze the intricacies involved in Analytical Ability and Digital Awareness.	L – 3 L – 4	Applying Analyzing
CO 3	Evaluate the effectiveness of alternative Analytical Ability and Digital Awareness plans and strategies in particular situations and create effective plans and strategies for Analytical Ability and Digital Awareness.	L – 5 L – 6	Evaluating Creating

Semester VI	BCA-22-601 : Cloud Computing
Credit – 5	LTP: 5:0:0

Course Outcomes: On successful completion of the course the learner will be able to

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	List & Infer the concept of cloud computing over various cloud computing platforms	L - 1 L – 2	Remembering Understanding
CO 2	Choose & Discover the trade-offs between deploying applications in the cloud and over the local infrastructure	L - 3 L – 4	Applying Analyzing
CO 3	Judge the cloud computing performance & Formulate the concept of upgrade performance matrices for underlying cloud technologies and software.	L – 5 L - 6	Evaluate Create

Semester VI	BCA-22-602: Cyber Security
Credit-5	LTP: 5:0:0

Course Outcomes: On successful completion of the course the learner will be able to

COs	Course Outcomes:	Cognitive Levels	Blooms Taxonomy
CO 1	Remember and understand the concepts of cyber security	L-1 L-2	Remembering Understanding
CO 2	Apply various techniques of cyber security to protect information system from cyber-attacks and analyze the intricacies involved in maintaining cyber security	L-3 L-4	Applying Analyzing
CO 3	Evaluate the importance of cyber security and create secure information system.	L-5 L-6	Evaluating Creating

Semester - VI	BCA -22– 603 – Introduction to Data Sciences
Credit – 6	LTP: 6:0:0

Course Outcomes: On successful completion of the course the learner will be able to

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	Conceptualise the basics of Data Science & its application	L - 1 L – 2	Remembering Understanding
CO 2	Utilise & Test the concept of AI and ML to modern day's business functions	L - 3 L – 4	Applying Analyzing
CO 3	Measure & Formulate the Data Analytics concept in real-time data science application	L – 5 L - 6	Evaluate Create

Semester VI	BCA-22-604: Python Programming
Credit– 4	LTP: 4:0:0

Course Outcomes: On successful completion of the course the learner will be able to:

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	Recall & Summarise the basic concepts of Python Programming language	L - 1 L – 2	Remembering Understanding
CO 2	Use the python programming syntax for Examining the real-time problems	L - 3 L – 4	Applying Analyzing
CO 3	Appraise the various Complex programming paradigm using python & also propose the real-time application using it	L – 5 L - 6	Evaluate Create

Semester VI	BCA-22-604P: Python Programming Lab
Credit– 2	LTP: 0:0:2

Course Outcomes: On successful completion of the course the learner will be able to:

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	Conceptualise the basics of python Programming	L - 1 L – 2	Remembering Understanding
CO 2	Applying & Analyzing the python programs with conditionals, loops & function.	L - 3 L – 4	Applying Analyzing
CO 3	Evaluate and Test different Python programs step-wise using functions and other paradigm	L – 5 L - 6	Evaluate Create

Semester VI	BCA-IF-22-605: Project -TWO
Credit – 3	LTP: 0:0:3

Course Outcomes: On successful completion of the course the learner will be able to

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	Remember and understand the concepts related to software	L –1 L –2	Remembering Understanding
CO 2	Apply the knowledge of technical languages to analyze various programme	L – 3 L - 4	Applying Analyzing
CO 3	Evaluate the effectiveness of software and create effective solutions for real-time technical problems	L -5 L –6	Evaluating Creating

Programme :B.C.A.	Year: Third	Semester: Sixth
Subject: Computer Applications		
Course Code: CC-6	Course Title: Communication Skills and Personality Development	

Course Outcomes: On successful completion of the course the learner will be able to-

COs	Course Outcomes	Cognitive Levels	Blooms Taxonomy
CO 1	Remember and understand the concepts related to Communication Skills and Personality Development	L – 1 L – 2	Remembering Understanding
CO 2	Apply the knowledge of Communication Skills and Personality Development to solve business problems and analyze the intricacies involved in Communication Skills and Personality Development	L – 3 L – 4	Applying Analyzing
CO 3	Evaluate the effectiveness of alternative Communication Skills and Personality Development plans and strategies in particular situations and create effective Communication Skills and Personality Development plans and strategies.	L – 5 L – 6	Evaluating Creating