



Program B.C.A.

Program Objectives

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| 1 | To provide the knowledge and enhance the understanding of software technologies. |
| 2 | To prepare for analyze and solve the problem with effective communication. |
| 3 | To make the managerial and technical skills to design the solution of real world problem. |
| 4 | To prepare for investigate complex problem and their solution. |
| 5 | To provide the ethical, social and cultural responsibilities in professional environment. |
| 6 | To prepare the new technology and upgrade their skills for lifelong learning. |

Program Outcomes

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| PO1 | Ability to demonstrate knowledge of Computer science and its applications in order to enhance basic understanding of various software technologies. |
| PO2 | Ability to analyze and identify various business and technical problems to further solve problems with effective communication. |
| PO3 | Ability to adapt analytical, logical and managerial skills with the technical aspects in order to design and deploy reliable software programs and application for real world problems. |
| PO4 | Ability to investigate complex problems and provide computer-based solutions. |
| PO5 | Ability to understand and deliver ethical, social and cultural responsibilities in professional environment as an individual and team. |
| PO6 | Ability to adapt new technologies for upgrading their skills and contributing to a lifelong learning. |

| Code. No/CO | Subjects | Blooms Taxonomy | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 |
|-------------------------|---|---|-----------|--------------|------------------------------|---------------------|-----------------------------------|---------------------|
| | | | Knowledge | (Creativity) | (Problem Solving and Design) | (Ethical Practices) | (Communication and Social Skills) | (Lifelong Learning) |
| YEAR I | | | | | | | | |
| SEM-1 | | | | | | | | |
| BCA-101 | Mathematics- I | | | | | | | |
| Course Objective | | | | | | | | |
| 1 | To learn mathematical properties of variance. | | | | | | | |
| 2 | To inculcate in students the fundamental mathematical background in computer science. | | | | | | | |
| 3 | To gain knowledge about matrices, integration, its methods, Mathematical logic, and Group theory. | | | | | | | |
| 4 | To learn advanced features of the numerical calculations. | | | | | | | |
| 5 | To learn the measures of vectors. | | | | | | | |
| CO1 | Able to define the concept of matrices and able to implement various rules applicable on it | Remembering (K1), Understanding (K3) | H | | M | | L | |
| CO2 | Able to understand the concept of Limit able to implement its properties | Understanding (K3), Applying (K4) | H | | M | | | |
| CO3 | Able to understand the concept of Differentiation and can apply its theorems | Understanding (K3), Applying (K4) | H | | | M | | |
| CO4 | Able to understand the concept of Integration and implement its different methods | Understanding (K3), Applying (K4) | H | H | H | H | M | |
| CO5 | Able to understand the concept of Vectors in various dimensions | Understanding (K3) | H | H | | M | | H |
| BCA-102 | Programming Principle & Algorithm | | | | | | | |
| Course Objective | | | | | | | | |
| 1 | To learn the basic concept of C programming language. | | | | | | | |
| 2 | To enhance problem solving and programming skills in C. | | | | | | | |
| 3 | Understand the concept of functions and pointer. In addition, resolve real world problems using functions and pointers | | | | | | | |
| 4 | To write implementation of a code and able to understand its working. | | | | | | | |
| 5 | Exercise user defined data types including structure and union. | | | | | | | |
| CO1 | Able to define and understand the basic concept of Tokens, Keywords, Identifiers, Variables, Constant, Data Types, and Comments | Remembering (K1), Understanding (K3) | H | | M | | L | |
| CO2 | Able to understand and implement the various Operators used in 'C' and their precedence | Understanding (K3), Applying (K4) | H | | M | | | |
| CO3 | Able to understand and apply Control structures | Understanding (K3), Applying (K4) | H | | | M | | |
| CO4 | Able to understand and create algorithm and flow chart | Understanding (K3), Creating (K6) | H | H | H | H | M | |
| CO5 | Able to understand the concept of function, its importance and can implement functions in 'C' and analyze result | Understanding (K3), Applying (K4), Analysing (K5) | H | H | | M | | H |
| BCA-103 | Computer Fundamental & Office Automation | | | | | | | |
| Course Objective | | | | | | | | |
| 1 | To introduce the components of computers . | | | | | | | |
| 2 | To introduce basic concepts of hardware and software. | | | | | | | |
| 3 | To introduce the general structure of the CPU, motherboard and advance interfaces | | | | | | | |
| 4 | To understand problem solving methodologies | | | | | | | |
| 5 | To develop and create algorithm and flowchart. | | | | | | | |
| 6 | To make the slide and develop the presentation skills. | | | | | | | |
| CO1 | Able to define the basic concept of Computer and its different parts | Understanding (K3) | H | | M | | L | |
| CO2 | Able to understand and implement the concepts of Algorithm and flow chart | Understanding (K3), Applying (K4) | H | | M | | | |
| CO3 | Able to understand the about various types of operating systems | Understanding (K3) | M | | | M | | |
| CO4 | Able to create a document using MS word | Creating (K6) | H | H | | H | M | |
| CO5 | Able to prepare worksheet MS Excel and able to analyze and evaluate results | Applying (K4), Analysing (K5), Evaluating | M | | | M | M | H |

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| CO6 | Able to prepare a presentation slide using MS Powerpoint | Applying K(3) | H | H | | M | | H |
| BCA-104 Principles of Management | | | | | | | | |
| Course Objective | | | | | | | | |
| 1 | To help the students gain understanding of the functions and responsibilities of managers. | | | | | | | |
| 2 | To provide them tools and techniques to be used in the performance of the managerial job. | | | | | | | |
| 3 | To enable them to analyze and understand the environment of the organization. | | | | | | | |
| 4 | To help the students to develop cognizance of the importance of management principles. | | | | | | | |
| CO1 | Can you define the concept of 'Management' and its various level | Understanding K(2) | H | | | M | | L |
| CO2 | Have you understood Business Ethics & Social Responsibility and various Management related theories | Understanding K(2) | H | | | M | | |
| CO3 | Have you understood the importance of planning and can apply planning in the organization | Understanding K(2) | H | | | | M | |
| CO4 | Have you understood why leader should require to motivate his subordinates | Understanding, Applying K(2), K(3) | H | H | H | H | | M |
| CO5 | Have you understood the advantage and disadvantages of the change in management | Understanding K(2) | H | H | | M | | H |
| CO6 | Have you understood the concept of strategic Management are you able to apply strategy | Understanding, Applying K(2), K(3) | H | L | M | | | M |
| BCA-105 Business Communication | | | | | | | | |
| Course Objective | | | | | | | | |
| 1 | To provide an overview of Prerequisites to Business Communication. | | | | | | | |
| 2 | To put in use the basic mechanics of Grammar. | | | | | | | |
| 3 | To provide an outline to effective Organizational Communication. | | | | | | | |
| 4 | To underline the nuances of Business communication. | | | | | | | |
| 5 | To impart the correct practices of the strategies of Effective Business writing. | | | | | | | |
| CO1 | Have you understood the importance of communication | Understanding K(2) | M | | | M | | M |
| CO2 | Have you understood and can perform better oral communication | Understanding, Applying K(2), K(3) | H | | | | | H |
| CO3 | Can you write a letter on any situation | Applying K(3) | M | H | | L | | H |
| CO4 | Can you understand and prepare Business Letters and analyze Reports | Understanding, Applying K(2),K(3) | M | H | | H | | H |
| CO5 | Are you able to create Business Letter and circulars | Creating K(6) | L | M | | | | |
| CO6 | Are you able to use or implement electronic devices for the communication for Mock Interview and Group discussion | Evaluating K(5) | M | H | | M | | H |
| EVS-008 Environmental Studies | | | | | | | | |
| Course Objective | | | | | | | | |
| 1 | To develop an attitude of concern for the environment. | | | | | | | |
| 2 | To Create the awareness about environmental problems among people. | | | | | | | |
| 3 | To integrate the knowledge from multiple disciplines representing physical and life sciences perspectives, with their environments. | | | | | | | |
| 4 | To prepare students for careers, citizenship and environmental stewardship through experiential curricular and co-curricular opportunities; | | | | | | | |
| 5 | To provide students with a broad interdisciplinary liberal arts framework for understanding the relationship between humans and their environment; | | | | | | | |
| CO1 | Have you understood the need for Public Awareness of Environmental Studies | Understanding K(2) | M | | | H | | H |
| CO2 | Have you understood about the natural and non-natural resources and can analyze these | Understanding, Analyzing K(2), K(4) | M | | | M | | M |
| CO3 | Have you understood the concept of Biodiversity and its conversation | Understanding K(2) | M | H | | L | | H |
| CO4 | Are you able to understand about the various types of pollutions | Understanding K(2) | H | | L | H | | M |
| CO5 | Are you able to analyze and evaluate social issues which are affecting environment | Analyzing, Evaluating K(4), K(5) | M | | M | | | H |
| SEM-II | | | | | | | | |
| BCA-201 Mathematics- II | | | | | | | | |
| Course Objective | | | | | | | | |
| 1 | To gain knowledge about sets, Relations functions, matrices, | | | | | | | |
| 2 | To Develop analytical ability to solve real-world problems using these methodologies. | | | | | | | |
| 3 | To inculcate in students the fundamental mathematical background in computer science. | | | | | | | |
| 4 | To develop logical understanding of the subject. | | | | | | | |
| 5 | To develop mathematical skill so that students are able to apply mathematical methods & principals in solving problem from computer science field. | | | | | | | |
| CO1 | Able to define the 'Sets' and its various types | Remembering K(1) | H | | | L | | |
| CO2 | Able to define the 'Relation' and 'Function' and implement Trigonometric, Logarithmic and Exponential Function | Remembering, Applying K(1), K(3) | H | | | H | | |
| CO3 | Able to understand about the Partial order relations and lattices | Understanding K(2) | M | | | H | | M |
| CO4 | Able to define and implement the concept Partial Differentiation | Remembering, Applying K(1), K(3) | H | | | H | | |
| CO5 | Able to determine the concept of 3D Coordinate Geometry | Applying K(3) | | | | | | |
| CO6 | Able to understand and determine the concept of Multiple Integration | Understanding, Applying K(2), K(3) | M | | | | | H |
| BCA-202 C Programming | | | | | | | | |
| Course Objective | | | | | | | | |
| 1 | To analyze problems efficiently and develop comprehensive logic to solve it. | | | | | | | |
| 2 | To develop good algorithms and flowcharts to solve problems. | | | | | | | |
| 3 | To write C programs in a structured manner. | | | | | | | |
| 4 | To understand the concept of header files. | | | | | | | |
| 5 | To make the student learn a programming language and learn problem solving techniques | | | | | | | |

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| BCA-302 | Data Structure using C & C++ | | | | | | | | |
| | Course Objective | | | | | | | | |
| 1 | To impart the basic concepts of data structures and algorithms | | | | | | | | |
| 2 | To understand concepts about searching and sorting techniques | | | | | | | | |
| 3 | To Understand basic concepts about stacks,queues,lists,trees and graphs | | | | | | | | |
| 4 | To understanding about writing algorithms and step by step approach in solving problems with the help of fundamental data structures | | | | | | | | |
| 5 | To Analyze the efficiency of programs based on time complexity. | | | | | | | | |
| CO1 | Do you remember Different types of Matrices | Remembering K(1) | | M | | | | | M |
| CO2 | Have you understood Stacks & Queues and can you implement these in 'C' or 'C++' | Understanding, Applying K(2), K(3) | H | | M | M | | L | M |
| CO3 | Have you understood linked list and its features and can you implement these in 'C' or 'C++' | Understanding, Applying K(2), K(3) | M | | L | M | | | |
| CO4 | Have you understood and implement different types of Trees. | Understanding, Applying K(2), K(3) | H | | M | H | | | |
| CO5 | Are you able to implement B-Trees and able to evaluate result | Applying, Evaluating K(3), K(5) | L | | | M | | L | M |
| CO6 | Are you able to implement Sorting and Searching | Applying, Evaluating K(3), K(5) | M | | | M | | | |
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| BCA-303 | Computer Architecture and Assembly Language | | | | | | | | |
| | Course Objective | | | | | | | | |
| 1 | To discuss the basic concepts and structure of computers. | | | | | | | | |
| 2 | To understand concepts of register transfer logic and arithmetic operations. | | | | | | | | |
| 3 | To explain different types of addressing modes and memory organization. | | | | | | | | |
| 4 | To learn the different types of serial communication techniques. | | | | | | | | |
| 5 | To summarize the Instruction execution stages. | | | | | | | | |
| CO1 | Are you able to define registers and memory | Understanding K(2) | | M | | | | | |
| CO2 | Have you understood different components of Central Processing Unit of a computer | Understanding K(2) | H | | M | L | | | M |
| CO3 | Have you understood Computer arithmetic and able to implement Computer arithmetic | Understanding, Applying K(2), K(3) | M | | M | M | | | |
| CO4 | Have you understood the Input-Output Organization | Understanding K(2) | M | | L | H | | | M |
| CO5 | Have you understood evaluation of microprocessor | Understanding K(2) | M | | | L | | L | M |
| CO6 | Have you understood and able to implement Assembly Language commands | Understanding, Applying K(2), K(3) | M | | M | L | | L | |
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| BCA-304 | Business Economics | | | | | | | | |
| | Course Objective | | | | | | | | |
| 1 | To familiarize the students with the basic concept of economics. | | | | | | | | |
| 2 | To make student understand the demand and supply analysis in business applications | | | | | | | | |
| 3 | To familiarize students with the production and cost structure under different stages of production. | | | | | | | | |
| 4 | To understand the pricing and output decisions under various market structure. | | | | | | | | |
| 5 | To help students understand and apply the various decision tools and policy 2004-2009. | | | | | | | | |
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| CO1 | Have you understood the Scope and able to define Method of Economics. | Understanding K(2) | H | | | | | M | L |
| CO2 | Have you understood Market Structure | Understanding K(2) | M | | | | | M | M |
| CO3 | Are you able to define Macro Economics Concerns and different policies | Understanding K(2) | M | | M | | | | |
| CO4 | Have you understood WTO, Group of 20, Export Import Policy 2004-2009 | Understanding K(2) | M | | M | | | M | M |
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| BCA-305 | Elements of Statistics | | | | | | | | |
| | Course Objective | | | | | | | | |
| 1 | To develop the skills to analyse complex statistical data coming from the various fields like industry, marketing, finance, agriculture and business. | | | | | | | | |
| 2 | To implement data analysis strategies to develop efficient models for various theoretical postulations. | | | | | | | | |
| 3 | To organize, manage and present data. | | | | | | | | |
| 4 | To derive the probability density function of transformation of random variables. | | | | | | | | |
| 5 | To calculate probabilities, and derive the marginal and conditional distributions of bivariate random variables. | | | | | | | | |
| CO1 | Can you define Statistics, and able to prepare frequency charts and able to analyze data | Understand, Applying K(2), K(3) | M | | M | L | | | |
| CO2 | Are you able to implement measure of central tendency and able to analyze data | Applying, Analyzing K(3), K(4) | M | | | M | | | M |
| CO3 | Are you able to implement measure of dispersion and able to analyze data | Applying, Analyzing K(3), K(4) | M | | M | L | | | |
| CO4 | Have you understood Probability | Understanding K(2) | M | | L | H | | | M |
| CO5 | Have you understood Statistical Quality Control | Understanding K(2) | M | | M | L | | | |
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| | SEM-IV | | | | | | | | |
| BCA-401 | Computer Graphics & Multimedia Application | | | | | | | | |
| | Course Objective | | | | | | | | |
| 1 | To understand the fundamental concepts and theory of computer graphics. | | | | | | | | |
| 2 | To understand modeling, and interactive control of 3D computer graphics applications. | | | | | | | | |
| 3 | To understand the underlying parametric surface concepts be understood. | | | | | | | | |
| 4 | To learn multimedia authoring tools. | | | | | | | | |
| 5 | Write basic graphics application programs including animation. | | | | | | | | |
| CO1 | Have you understood the basics of the computer graphics | Understanding K(2) | M | | M | L | | | |
| CO2 | Are you able to define scanning techniques and have you understood different algorithms | Remembering, Understanding K(1), K(2) | M | | | M | | | M |
| CO3 | Are you able to perform 3D transformation with the help of 'C' language | Applying K(3) | M | | M | L | | | |
| CO4 | Are you able to draw different curves using 'C' | Applying K(3) | M | | L | M | | L | M |
| CO5 | Can you define Multimedia and multimedia related devices | Remembering K(1) | M | | L | H | | | M |

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| CO6 | Have you understood the concept of making multimedia | Understanding K(2) | M | M | L | | | |
| BCA-402 Operating System | | | | | | | | |
| Course Objective | | | | | | | | |
| 1 | To understand the services provided by and the design of an operating system. | | | | | | | |
| 2 | To understand the structure and organization of the file system. | | | | | | | |
| 3 | To understand what a process is and how processes are synchronized and scheduled. | | | | | | | |
| 4 | To understand different approaches to memory management. | | | | | | | |
| 5 | To understand the concept of system calls for managing processes, memory and the file system. | | | | | | | |
| CO1 | Have you understood basic concepts of Operating system | Understanding K(2) | M | | M | | | |
| CO2 | Have you understood different CPU scheduling techniques | Understanding K(2) | H | | L | | | |
| CO3 | Are you able to define deadlocks | Remembering K(1) | M | | M | | | |
| CO4 | Have you understood Input-Output and storage devices | Understanding K(2) | M | | | | | M |
| CO5 | Have you understood the concept of File System | Understanding K(2) | M | | H | | | M |
| BCA-403 Software Engineering | | | | | | | | |
| Course Objective | | | | | | | | |
| 1 | To gain the knowledge of basic SW engineering methods and practices, and their appropriate application. | | | | | | | |
| 2 | To describe software engineering layered technology and Process frame work. | | | | | | | |
| 3 | To understand the software process models such as the waterfall and evolutionary models. | | | | | | | |
| 4 | To understand the software requirements and the SRS documents. | | | | | | | |
| 5 | To understand the role of project management including planning, scheduling, risk management, etc. | | | | | | | |
| 6 | To describe data models, object models, context models and behavioral models. | | | | | | | |
| CO1 | Are you able to define Software Engineering | Remembering K(1) | M | | L | | | M |
| CO2 | Have you understood Requirement Analysis and can you create SRS for a project | Remembering, Creating K(2), K(6) | M | | M | | | L |
| CO3 | Have you understand the designing paradigms. Can you create ER diagram and DFDs | Remembering, Creating K(2), K(6) | H | | | | | H |
| CO4 | Have you understood the implementation process | Understanding, Applying K(2), K(3) | M | | | | | M |
| CO5 | Have you understood different types of maintenance | Understanding K(2) | M | | | | | |
| CO6 | Are you able to implement SDLC | Applying K(3) | M | | M | | | H |
| BCA-404 Optimization Technique | | | | | | | | |
| Course Objective | | | | | | | | |
| 1 | To enumerate the fundamental knowledge of Linear Programming and Dynamic Programming problems. | | | | | | | |
| 2 | To Learn classical optimization techniques and numerical methods of optimization. | | | | | | | |
| 3 | To Know the basics of different evolutionary algorithms. | | | | | | | |
| 4 | To explain Integer programming techniques and apply different optimization techniques to solve various models | | | | | | | |
| 5 | To understand the maximization and minimization of convex functions | | | | | | | |
| CO1 | Have you understood the concept of linear programming an can you solve a problem using LPP methods and analyse the result | Understanding, Applying K(2),K(3) | M | | | | | M |
| CO2 | Do you know Queuing problem and can you solve queuing problems | Understanding, Applying, Creating K(1), K(2) ,K(6) | M | | M | | | H |
| CO3 | Have you understood the concept of replacement theory and can you find out the best time to replace any product. | Understanding, Applying K(2),K(3) | | | M | | | H |
| CO4 | Are you able to solve problems based on Inventory Theory | Applying K(3) | M | | L | | | M |
| CO5 | Are you able to solve the problems related to job sequence and able to interpret results | Understanding, Applying, Analyzing K(2),K(3), K(4) | M | | | | | |
| BCA-406 Mathematics-III | | | | | | | | |
| Course Objective | | | | | | | | |
| 1 | To develop logical understanding of the subject. | | | | | | | |
| 2 | To develop mathematical skill so that students are able to apply mathematical methods & principals in solving problem from computer science fields. | | | | | | | |
| 3 | To understand the Linear Algebra through matrices. | | | | | | | |
| 4 | To understand the Complex integration. | | | | | | | |
| 5 | To use computational tools to solve problems and applications of Ordinary Differential Equations and Partial Differential Equations. | | | | | | | |
| CO1 | Can you define complex variables | Remembering K(1) | M | | | | | L |
| CO2 | Have you understood sequence, series and convergence and able to solve the problems | Understanding, Applying K(2), K(3) | M | | L | | | M |
| CO3 | Have you understood Vector Calculus | Remembering K(1) | M | | L | | | M |
| CO4 | Do you know Fourier Series can you solve questions based on it | Understanding, Applying K(2), K(3) | M | | | | | M |
| CO5 | Are you able to solve ordinal differential equations of first order | Applying K(3) | L | | L | | | M |
| CO6 | Are you able to solve ordinal differential equations of second order | Applying K(3) | M | | L | | | L |
| YEAR III | | | | | | | | |
| SEM-V | | | | | | | | |
| BCA-501 Introduction to DBMS | | | | | | | | |
| Course Objective | | | | | | | | |
| 1 | Describe the fundamental elements of relational database management systems | | | | | | | |
| 2 | Explain the basic concepts of relational data model, entity-relationship model, relational database design, relational algebra and SQL. | | | | | | | |
| 3 | Design ER-models to represent simple database application scenarios | | | | | | | |
| 4 | Convert the ER-model to relational tables, populate relational database and formulate SQL queries on data. | | | | | | | |
| 5 | Improve the database design by normalization. | | | | | | | |
| 6 | Familiar with basic database storage structures and access techniques: file and page organizations, indexing methods including B tree, and hashing. | | | | | | | |

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| CO1 | Are you able to define Database and its characteristics and architecture? | Remembering, Understanding K(1), K(2) | M | L | L | | |
| CO2 | Have you understood ER Diagram and able to Prepare & Analyze the project and create ER Diagram | Understanding, APPLYING, ANALYZING, CREATING K(2), K(3), K(4), K(6) | | | | | |
| CO3 | Are you able to understand File organization | Understanding K(2) | M | L | M | | M |
| CO4 | Have you understood Relational Model and able to analyse the project and can create SQL queries | Understanding, APPLYING, ANALYZING, CREATING K(2), K(3), K(4), K(6) | M | L | L | | M |
| CO5 | Can you define EER | Understanding K(2) | L | | L | | M |
| CO6 | Have you understood Data Normalization and concurrency control | Understanding K(2) | M | M | M | | |
| BCA-502 Java Programming and Dynamic Webpage Design | | | | | | | |
| Course Objective | | | | | | | |
| 1 | Write Java application programs using OOP principles and proper program structuring. | | | | | | |
| 2 | To understand the basic concepts and fundamentals of platform independent object oriented language. | | | | | | |
| 3 | To demonstrate skills in writing programs using exception handling techniques and multithreading. | | | | | | |
| 4 | To understand servlets and network connectivity approaches. | | | | | | |
| 5 | To develop reusable programs using the concepts of inheritance, polymorphism, interfaces and packages. | | | | | | |
| 6 | To design dynamic web pages using css, jsp. | | | | | | |
| CO1 | Have you understood the basic concepts of Java programming | Understanding, APPLYING, CREATING K(2), K(3), K(6) | L | | M | L | |
| CO2 | Have you understood Java Applets and able to create webpage using Java Applets | Understanding, APPLYING, CREATING K(2), K(3), K(6) | H | M | | | M |
| CO3 | Have you understood Socket Programming and able to implement JDBC | Understanding, APPLYING, CREATING K(2), K(3), K(6) | M | L | M | | |
| CO4 | Have you understood HTML and able to create webpage using HTML | Understanding, APPLYING, CREATING K(2), K(3), K(6) | M | M | H | | M |
| CO5 | Have you understood Java Servlets and able to use Java Servlet in webpage | Understanding, APPLYING, CREATING K(2), K(3), K(6) | M | | H | | M |
| CO6 | Have you understood the concept of Java Server Pages and able to use JSP in webpage | Understanding, APPLYING, CREATING K(2), K(3), K(6) | M | H | L | | |
| BCA-503 Computer Network | | | | | | | |
| Course Objective | | | | | | | |
| 1 | To build an understanding of the fundamental concepts of data communication and computer networking. | | | | | | |
| 2 | To implement a simple LAN with hubs, bridges and switches. | | | | | | |
| 3 | To understand how errors detected and corrected that occur in transmission | | | | | | |
| 4 | To know about routing mechanisms and different routing protocols 5. Understand transport layer functions | | | | | | |
| 5 | To know about different application layer protocols | | | | | | |
| CO1 | Are you able to define Computer network and OSI/TCP Models | Remembering K(1) | M | | L | | |
| CO2 | Have you understood different Transmission Media | Understanding K(2) | L | L | M | | M |
| CO3 | Have you understood Multiplexer and different types of multiplexers and able to understand DLC protocol | Understanding K(2) | M | | M | | |
| CO4 | Can you define different types of networking devices and able to understand different routing algorithm | Remembering, Understanding K(1), K(2) | M | M | H | | M |
| CO5 | Can you define Transport Layer, Session Layer and Application Layer | Remembering K(1) | M | | H | | M |
| BCA-504 Numerical Methods | | | | | | | |
| Course Objective | | | | | | | |
| 1 | To provide suitable and effective methods called Numerical Methods, for obtaining approximate representative numerical results of the problems. | | | | | | |
| 2 | To develop the mathematical skills of the students in the areas of numerical methods. | | | | | | |
| 3 | To teach theory and applications of numerical methods | | | | | | |
| 4 | To deal with the various topics which require solutions of linear systems, finding eigen values, eigenvectors, interpolation and applications | | | | | | |
| 5 | To facilitate numerical computing. | | | | | | |
| CO1 | Have you understood Roots of Equations and able to apply these method in finding the Roots of the equation | Understanding, Applying K(2), K(3) | M | L | | | |
| CO2 | Have you understood the concept of Interpolation and Extrapolation and Are you able to apply different method based on Interpolation and Extrapolation and bale to interpret the results | Understanding, Applying, Analyzing K(2), K(3), K(4) | M | M | M | | M |
| CO3 | Have you understood the concept of Numerical Differentiation Numerical Integration and able to implement and able to analyse Area, Volume, Distance by applying any of the method | Understanding, Applying, Analyzing K(2), K(3), K(4) | H | | L | | |
| CO4 | Have you understood the concepts of solution of Linear Equation and able to apply & analyse it on different cases | Understanding, Applying, Analyzing K(2), K(3), K(4) | M | L | M | | M |
| CO5 | Have you understood the concepts of solution of Differential Equation and able to apply & analyse it on different cases | Understanding, Applying, Analyzing K(2), K(3), K(4) | M | M | M | | M |
| SEM-VI | | | | | | | |
| BCA-601 Computer Network Security | | | | | | | |
| Course Objective | | | | | | | |
| 1 | To understand basics of Cryptography and Network Security. | | | | | | |
| 2 | To be able to secure a message over insecure channel by various means. | | | | | | |
| 3 | To learn about how to maintain the Confidentiality, Integrity and Availability of a data. | | | | | | |
| 4 | To understand various protocols for network security to protect against the threats in the networks | | | | | | |
| 5 | Define the terms vulnerability, threat and attack | | | | | | |

