



EVEN SEMMISTER

BCA UPDATED SYLLABUS(2019-20)

COURSE CONTENT

SEMESTER II

COURSE CODE

BCA-201
BCA-202
BCA-203
BCA-204
BCA-205
BCA-206P

COURSE NAME

Mathematics II (MATHS)
C Programming (C Prog)
Organization Behavior (OB)
Digital Electronics & Computer Organization (DECO)
Financial Accounting & Management (FAM)
Computer Laboratory and Practical Work of C Programming

SEMESTER IV

COURSE CODE

BCA-401
BCA-402
BCA-403
BCA-404
BCA-406
BCA-405

COURSE NAME

Computer Graphics & Multimedia Application (CGMA)
Operating System (OS)
Software Engineering (SE)
Optimization Techniques (OT)
Mathematics-III (MATHS)
Computer Laboratory and Practical Work of CGMA

SEMESTER VI

COURSE CODE

BCA-601
BCA-602
BCA-603
BCA-604
BCA-605P
BCA-506P

COURSE NAME

Computer Network Security
Information System: Analysis Design & Implementation
E-Commerce
Knowledge Management
Major Project
Presentation/Seminar based on Major Project

Unit – I	Sets	Sets, Subsets, Equal Sets Universal Sets, Finite and Infinite Sets, Operation on Sets, Union, Intersection and Complements of Sets, Cartesian Product, Cardinality of Set, Simple Applications
Unit – II	Relations and functions	Properties of Relations, Equivalence Relation, Partial Order Relation Function: Domain and Range, Onto, Into and One to One Functions, Composite and Inverse Functions, Introduction of Trigonometric, Logarithmic and Exponential Functions
Unit– III	Partial order relations and lattices	Partial Order Sets, Representation of POSETS using Hasse diagram, Chains, Maximal and Minimal Point, Glb, lub, Lattices & Algebraic Systems, Principle of Duality, Basic Properties, sublattices, Distributed & Complemented Lattices
Unit– IV	Functions of several variables	Partial Differentiation, Change of Variables, Chain Rule, Extrema of Functions of 2 Variables, Euler’s Theorem
Unit – V	3d coordinate geometry	3D Coordinate Geometry: Coordinates in Space, Direction Cosines, Angle Between Two Lines, Projection of Join of Two Points on a Plane, Equations of Plane, Straight Lines, Conditions for a line to lie on a plane, Conditions for Two Lines to be Coplanar, Shortest Distance Between Two Lines, Equations of Sphere, Tangent plane at a point on the sphere
Unit – VI	Multiple integration	Double Integral in Cartesian and Polar Coordinates to find Area, Change of Order of Integration, Triple Integral to Find Volume of Simple Shapes in Cartesian Coordinates.

Referential Books:

1. Kolman, Busby and Ross, “Discrete Mathematical Structure”, PHI, 1996.
2. S.K. Sarkar, “Discrete Maths”; S. Chand & Co., 2000

BCA-202 C Programming

Unit – I	Arrays	Definition, declaration and initialization of one dimensional array; Accessing array elements; Displaying array elements; Sorting arrays; Arrays and function; Two-Dimensional array: Declaration and Initialization, Accessing and Displaying, Memory representation of array [Row Major, Column Major]; Multidimensional array
Unit – II	Pointers	Definition and declaration, Initialization; Indirection operator, address of operator; pointer arithmetic; dynamic memory allocation; arrays and pointers; function and pointers
Unit– II	Strings	Definition, declaration and initialization of strings; standard library function: strlen(), strcpy(), strcat(), strcmp(); Implementation without using standard library functions
Unit– IV	Structures	Definition and declaration; Variables initialization; Accessing fields and structure operations; Nested structures; Union: Definition and declaration; Differentiate between Union and structure
Unit – V	Introduction C Preprocessor	Definition of Preprocessor; Macro substitution directives; File inclusion directives; Conditional compilation
	Bitwise Operators	Bitwise operators; Shift operators; Masks; Bit field
Unit – VI	File handling	Definition of Files, Opening modes of files; Standard function: fopen(), fclose(), feof(), fseek(), fewind(); Using text files: fgetc(), fputc(), fscanf()
		Command line arguments

Referential Books:

1. Let us C-Yashwant Kanetkar.
2. Programming in C-Balguruswamy
3. The C programming Lang., Person Ecl - Dennis Ritchie
4. Structured programming approach using C-Forouzah & Ceilberg Thomson learning publication

BCA-203 Organization Behavior

Unit – I	Fundamentals of Organizational Behaviour	Nature, Scope, Definition and Goals of organizational Behaviour; Fundamental Concepts of Organizational Behaviour; Models of Organizational Behaviour; Emerging aspects of Organizational Behaviour: Meaning Cultural Diversity, Managing the Perception Process
Unit – II	Perception, Attitude, Values and Motivation	Concept, Nature, Process, Importance, Management Behavioural aspect of Perception. Effects of employee attitudes; Personal and Organizational Values; Job Satisfaction; Nature and Importance of Motivation; Achievement Motive; Theories of Work Motivation: Maslow's Need Hierarchy Theory McGregors's Theory 'X' and Theory 'Y'
Unit– III	Personality	Definition of Personality, Determinants of Personality; Theories of Personality- Trait and Type Theories, The Big Five Traits, Mytes-Briggs Indicator; Locus of Control, SType A and Type B Assessment of Personality
Unit– IV	Work Stress	Meaning and definition of Stress, Symptoms of Stress; Sources of Stress: Individual Level, Group Level, Organizational Level; Stressors, Extra Organizational Stressors; Effect of Stress - Burnouts; Stress Management - Individual Strategies, Organizational Strategies; Employee Counselling
Unit – V	Group Behaviour and Leadership	Nature of Group, Types of Groups; Nature and Characteristics of team; Team Building, Effective Teamwork; Nature of Leadership, Leadership Styles; Traits of Effective Leaders
Unit – VI	Conflict in Organizations	Nature of Conflict, Process of Conflict; Levels of Conflict - Intrapersonal, Interpersonal; Sources of Conflict; Effect of Conflict; Conflict Resolution, Meaning and types of Grievances & Process of Grievances Handling.

Referential Books:

1. Organizational Behavior Text, Cases and Games- By K.Aswhathappa, Himalaya Publishing House, Mumbai, Sixth Edition (2005)
2. Organizational Behavior Human Behavior at Work By J.W. Newstrom, Tata McGraw Hill Publishing Company Limited, New Delhi, 12th Edition (2007)
- 3 Organizational Behavior - By Fred Luthans
- 4 Organizational Behavior - By Super Robbins
5. Organizational Behavior - Anjali Ghanekar
6. Organizational Behavior Fundamentals, Realities and Challenges By Detra Nelson, James Campbel Quick Thomson Publications
7. Organizational Behavior through Indian Philosophy, By N.M.Mishra, Hikalaya Publication House

BCA-204 Digital Electronics & Computer Organization

Unit – I	Logic gates and circuit	Gates (OR, AND, NOR, NAND, XOR & XNOR); Demorgan's laws; Boolean laws, Circuit designing techniques (SOP, POS, K-Map).
Unit – II	Combinational Building Blocks	Multiplexes; Decoder; Encoder; Adder and Subtractor.
Unit– III	Memories	ROMs, PROMs, EPROMs, RAMs, Hard Disk, Floppy Disk and CD-ROM
Unit– IV	Sequential Building Blocks	Flip-Flop (RS, D, JK, Master-slave & T flip- flops); Registers & Shift registers; Counters; Synchronous and Asynchronous Designing method
Unit – V	Memory Organization	Basic cell of static and dynamic RAM; Building large memories using chips; Associative memory; Cache memory organization and Virtual memory organization

Referential Books:

1. Digital Logic and Computer design (PHI) 1998 : M.M. Mano
2. Computer Architecture (PHI) 1998 : M.M. Mano
3. Digital Electronics (TMH) 1998 : Malvino and Leach
4. Computer Organization and Architecture : William Stallings
5. Digital fundamentals (Universal Book Stall) 1998 : Floyd, L.Thomas
6. Computer Organization (MC Graw-Hill, Signapore) : Hamcher, Vranesic and Zaky

BCA-205 Financial Accounting & Management

- Unit – I** : Overview - Meaning and Nature of Financial Accounting, Scope of Financial Accounting, Financial Accounting & Management Accounting, Accounting concepts & convention, Accounting standards in India
- Unit – II** : Basics of accounting - Capital & Revenue items, Application of Computer in Accounting Double Entry System, Introduction to Journal, Ledger and Procedure for Recording and Posting, Introduction to Trail Balance, Preparation of Final Account, Profit & Loss Account and related concepts, Balance Sheet and related concept
- Unit– III** : Financial statement analysis: Ratio analysis, Funds flow analysis, concepts, uses, Preparation of funds flow statement, simple problem, Cash flow analysis, Concepts, uses, preparation of cash flow statement, simple problem, Break - even analysis
- Unit– IV** : Definition nature and Objective of Financial Management, Long Term Sources of Finance, Introductory idea about capitalization, Capital Structure, Concept of Cost of Capital, introduction, importance, explicit & implicit cost, Measurement of cost of capital, cost of debt.
- Unit – V** : Concept & Components of working Capital. Factors Influencing the Composition of working Capital, Objectives of working Capital Management - Liquidity Vs. Profitability and working capital policies. Theory of working capital: Nature and concepts
- Unit – VI** : Cash Management, Inventory Management and Receivables Management

Referential Books:

1. Maheshwari & Maheshwari, "An Introduction to Accountancy", 8th Edition, Vikas Publishing House, 2003
2. Gupta R.L., Gupta V.K., "Principles & Practice of Accountancy", Sultan Chand & Sons, 1999.
3. Khan & Jain, "Financial Accounting"
4. Maheshwari S.N., "Principles of Management Accounting", 11th Edition, Sultan Chand & Sons, 2001
5. Shukla and Grewal, "Advanced Accounts", 14th Edition, Sultan Chand & Sons.

BCA-206 Computer Laboratory and Practical Work of C Programming

Practical will be based on Paper Programming Principle & Algorithm: Covers UNIT-III, UNIT-IV, UNIT-V, UNIT-VI of Syllabus

COURSE CONTENT FOR SEMESTER – IV

BCA-401 Computer Graphics & Multimedia Application

- Unit – I** Introduction: The Advantages of Interactive Graphics, Representative Uses of Computer Graphics, Classification of Application Development of Hardware and software for computer Graphics, Conceptual Framework for Interactive Graphics, Overview, Scan: Converting Lines, Scan Converting Circles, Scan Converting Ellipses.
- Unit – II** Hardcopy Technologies, Display Technologies, Raster-Scan Display System, Video Controller, Random-Scan Display processor, Input Devices for Operator Interaction, Image Scanners, Working exposure on graphics tools like Dream Weaver, 3D Effects etc, Clipping Southland- Cohen Algorithm, Cyrus-Beck Algorithm, Midpoint Subdivision Algorithm
- Unit– III Geometrical Transformation:** 2D Transformation, Homogeneous Coordinates and Matrix Representation of 2D Transformations, composition of 2D Transformations, the Window-to-Viewport Transformations, Introduction to 3D Transformations Matrix.
- Unit– IV Representing Curves & Surfaces:** Polygon meshes parametric, Cubic Curves, Quadric Surface. Solid Modeling: Representing Solids, Regularized Boolean Set Operation primitive Instancing Sweep Representations, Boundary Representations, Spatial Partitioning Representations, Constructive Solid Geometry Comparison of Representations.
- Unit – V** Introductory Concepts: Multimedia Definition, CD-ROM and the multimedia highway, Computer Animation (Design, types of animation, using different functions)
- Unit – VI** Uses of Multimedia, Introduction to making multimedia - The stage of Project, hardware & software requirements to make good multimedia skills and Training opportunities in Multimedia Motivation for Multimedia usage

Referential Books:

1. Foley, Van Dam, Feiner, Hughes, Computer Graphics Principles & practice, 2000.
2. D.J. Gibbs & D.C. Tsichritz: Multimedia programming Object Environment & Frame work , 2000.
3. Ralf Skinmeiz and Klana Naharstedt, Multimedia: computing, Communication and Applications, pearson, 2001.
4. D.Haran & Baker. Computer Graphics Prentice Hall of India, 1986

BCA-402 **Operating System**

Unit – I Introduction, What is an operating system, Simple Batch Systems, Multi-programmed Batch systems, Time- Sharing Systems, Personal - Computer Systems, Parallel systems, Distributed systems, Real- Time Systems. Memory Management: Background, Logical versus physical Address space, swapping, Contiguous allocation, Paging, Segmentation Virtual Memory: Demand Paging, Page Replacement, Page-replacement Algorithms, Performance of Demand Paging, Allocation of Frames, Thrashing, Other Considerations

Unit – II **Processes:** Process Concept, Process Scheduling, Operation on Processes.
CPU Scheduling: Basic Concepts, Scheduling Criteria, Scheduling Algorithms, Multiple - Processor Scheduling.
Process Synchronization: Background, The Critical - Section Problem, Synchronization Hardware, Semaphores, Classical Problems of Synchronization

Unit– III **Deadlocks:** System Model, Deadlock Characterization, Methods for Handling Deadlocks, Deadlock prevention, Deadlock Avoidance, Deadlock Detection, Recovery from Deadlock.

Unit– IV **Device Management:** Techniques for Device Management, Dedicated Devices, Shared Devices, Virtual Devices; Input or Output Devices, Storage Devices, Buffering, Secondary Storage
Structure: Disk Structure, Disk Scheduling, Disk Management, Swap- Space Management, Disk Reliability

Unit – V **Information Management:** Introduction, A Simple File system, General Model of a File System, Symbolic File System, Basic File System, Access Control Verification, Logical File System.

Physical File system File - System Interface; File Concept, Access Methods, Directory Structure, Protection, Consistency Semantics File - System Implementation: File- System Structure, Allocation Methods, Free-Space Management

Referential Books:

1. Silberschatz and Galvin, “ Operating System Concepts”, Person, 5th Ed.2001
2. Madnick E., Donovan J., “ Operating Systems:,Tata McGrawHill,2001
3. Tannenbaum, “Operating Systems”, PHI, 4th Edition, 2000

BCA-403 Software Engineering

- Unit – I Software Engineering:** Definition and paradigms, A generic view of software are engineering.
- Unit – II Requirements Analysis:** Statement of system scope, isolation of top level processes and entitles and their allocation to physical elements, refinement and review. Analyzing a problem, creating a software specification document, review for correctness, consistency, and completeness.
- Unit– III Designing Software Solutions:** Refining the software Specification; Application of fundamental design concept for data, architectural and procedural designs using software blue print methodology and object oriented design paradigm; Creating design document: Review of conformance to software requirements and quality.
- Unit– IV Software Implementation:** Relationship between design and implementation, Implementation issues and programming support environment, Coding the procedural design, Good coding style and review of correctness and readability.
- Unit – V Software Maintenance:** Maintenance as part of software evaluation, reasons for maintenance, types of maintenance (Perceptive, adoptive, corrective), designing for maintainability, techniques for maintenance.
- Unit – VI Comprehensive examples using available software platforms/case tools, Configuration Management.**

Referential Books:

1. K.K.Aggarwal & Yogesh Singh "Software engineering", 2nd Ed., New Age International 2005.
2. I.Sommerville, "Software Engineering", Addison Wesley, 2002.
3. James Peter, W. Pedrycz, "Software Engineering: An Engineering Approach" JohnWiley & Sons.

BCA-404 Optimization Techniques

Unit – I Linear programming: Central Problem of linear Programming various definitions included Statements of basic theorem and also their properties, simplex methods, primal and dual simplex method, transport problem, tic-tac problem, and its solution. Assignment problem and its solution. Graphical Method Formulation, Linear Programming Problem.

Unit – II Queuing Theory: Characteristics of queuing system, Classification of Queuing Model Single Channel Queuing Theory, Generalization of steady state M/M/1 queuing models(Model-I, Model-II).

Unit– III Replacement Theory: Replacement of item that deteriorates replacement of items that fail. Group replacement and individual replacement.

Unit– IV Inventory Theory: Cost involved in inventory problem- single item deterministic model economics long size model without shortage and with shorter having production rate infinite and finite.

UNIT-V Job Sequencing: Introduction, solution of sequencing problem Johnson s algorithm for n jobs through 2 machines.

Referential Books:

1. Gillet B.E. "Introduction to Operation Research"
2. Taha,H.A. "Operation Research - an introduction"
3. Kanti Swarup "Operation Research"
4. S.D.Sharma "Operation Research"
5. Hira & Gupta "Operation Research"

BCA-406 Mathematics III

Unit – I COMPLEX VARIABLES: Complex Number System, Algebra of Complex Numbers, Polar Form, Powers and Roots, Functions of Complex Variables, Elementary Functions, Inverse Trigonometric Function.

Unit – II SEQUENCE, SERIES AND CONVERGENCE: Sequence, Finite and Infinite Sequences, Monotonic Sequence, Bounded Sequence, Limit of a Sequence, Convergence of a Sequence, Series, Partial Sums, Convergent Series, Theorems on Convergence of Series (statement, alternating series, conditional convergent), Leibnitz Test, Limit Comparison Test, Ratio Test, Cauchy's Root Test, Convergence of Binomial and Logarithmic Series, Raabe's Test, Logarithmic Test, Cauchy's Integral Test (without proof)

Unit– III VECTOR CALCULUS: Differentiation of Vectors, Scalar and Vector Fields, Gradient, Directional Derivatives, Divergence and Curl and their Physical Meaning.

Unit– IV FOURIER SERIES: Periodic Functions, Fourier series, Fourier Series of Even and Odd Functions, Half Range Series.

Unit – V ORDINARY DIFFERENTIAL EQUATIONS OF FIRST ORDER: Variable- Separable Method, Homogeneous Differential Equations, Exact Differential Equations, Linear Differential Equations, Bernoulli's Differential Equations, Differential Equations of First Order and First Degree by Integrating Factor.

Unit – VI ORDINARY DIFFERENTIAL EQUATIONS OF SECOND ORDER: Homogenous Differential Equations with Constant Coefficients, Cases of Complex Roots and Repeated Roots, Differential Operator, Solutions by Methods of Direct Formulae for Particular Integrals, Solution by Undetermined Coefficients, Cauchy Differential Equations, (only Real and Distinct Roots) Operator Method for Finding Particular Integrals, (Direct Formulae).

Referential Books:

1. A.B. Mathur and V.P. Jaggi, "Advanced Engineering Mathematics", Khanna Publishers, 1999.
2. 2. H.K. Dass, "Advanced Engineering Mathematics", S. Chand & Co., 9th Revised Ed.

Course Code Course Name

BCA-405 Computer Laboratory and Practical Work of Computer Graphics & Multimedia Application

Practical will be based on Paper Computer Graphics & Multimedia Application: Covers UNIT-II, UNIT-III, UNIT-V of Syllabus

COURSE CONTENT FOR SEMESTER – VI

BCA-601 Computer Network Security

- Unit – I Introduction:** Attack, Services and Mechanism, Model for Internetwork Security.
Cryptography: Notion of Plain Text, Encryption, Key, Cipher Text, Decryption and cryptanalysis; Public Key Encryption, digital Signatures and Authentication.
- Unit – II Network Security:** Authentication Application: Kerberos, X.509, Directory Authentication Service, Pretty Good Privacy, S/Mime.
- Unit– III IP security Architecture:** Overview, Authentication header, Encapsulating Security Pay Load combining Security Associations, Key Management.
- Unit– IV Web Security:** Requirement, Secure Socket Layer, Transport Layer Security, and Secure Electronic Transactions.
- Unit – V Network Management Security:** Overview of SNMP Architecture-SMMPV1 Communication Facility, SNMPV3.
- Unit – VI System Security:** Intruders, Viruses and Related Threats, Firewall Design Principles. Comprehensive examples using available software platforms/case tools, Configuration Management.

Referential Books:

1. W. Stallings, Networks Security Essentials: Application & Standards, Pearson Education, 2000.
2. W. Stallings, Cryptography and Network Security, Principles and Practice, Pearson Education, 2000.

BCA-602 Information System: Analysis Design & Implementation

Unit – I Overview of System Analysis and Design: Systems Development Life Cycle; concept and Models: requirements determination, logical design, physical design, test planning, implementation, planning and performance evaluation, communication, interviewing, presentation skills; group dynamics; risk and feasibility analysis; group based approaches, JAD, structures walkthroughs, and design and code reviews; prototyping; database design software quality metrics; application categories software package evaluation and acquisition.

Unit – II Information Requirement Analysis: Process modeling with physical logical data flow diagrams, data modeling with logical entity relationship diagrams.

Unit– III Developing a Proposal: Feasibility study and cost estimation. System Design: Design of input and control, design of output and control, file design/database design, process, user interface design, prototyping; software constructors; documentation.

Unit– IV Application Development Methodologies and CASE tools: Information engineering structured system analysis and design, and object oriented methodologies for application development data modeling, process modeling, user interface design, and prototyping, use of computer aided software engineering (CASE) tools in the analysis design and implementation of information systems.

Unit – V Design and Implementation on OO Platform: Object oriented analysis and design through object modeling technique, object modeling, dynamic modeling and functional object oriented design and object oriented programming systems for implementation, object oriented data bases.

Unit- VI Managerial issues in Software Projects: Introduction to software markets; planning of software projects, size and cost estimates; project scheduling; measurement of software quality and productivity, ISO and capability maturity models for organizational growth.

Referential Books:

1. I.T.Haryszkiewicz, Introduction of System Analysis and Design, Pearson Education, (PHI) 1998.
2. V.Rajaraman, Analysis and Design of Information System, Pearson Education, 1991.
3. J.A.Senn, "Analysis and Design of Information Systems"
4. J.K.Whiten., L.D.Bentley, V.M.Beslow, "System Analysis and Design Methods", (Galgotia Publications Pvt.Ltd.) 1994

Unit – I Introduction to E-Commerce: The Scope of Electronic Commerce, Definition of Electronic Commerce, Electronic E-commerce and the Trade Cycle, Electronic Markets, Electronic Data Interchange, Internet Commerce, E-Commerce in Perspective.

Business Strategy in an Electronic Age: Supply Chains, Porter's Value Chain Model, Inter Organizational Value Chains, Competitive Strategy, Porter's Model, First Mover Advantage Sustainable Competitive Advantage, Competitive Advantage using E-Commerce, Business Strategy, Introduction to Business Strategy, Strategic Implications of IT, Technology, Business Environment, Business Capability, Exiting Business Strategy, Strategy Formulation & Implementation Planning, E-Commerce Implementation, E-Commerce Evaluation.

Unit – II Business-to-Business Electronic Commerce: Characteristics of B2B EC, Models of B2B Ec, Procurement Management Using the Buyer's Internal Marketplace, Just in Time Delivery, Other B2B Models, Auctions and Services from Traditional to Internet Based EDI, Intergration with Back-end Information System, The Role of Software Agents for B2B EC, Electronic marketing in B2B, Solutions of B2B EC, Managerial Issues, Electronic Data Interchange (EDI), EDI: The Nuts and Bolts, EDI & Business.

Unit– III Internet and Extranet : Automotive Network Exchange, The Largest Extranet, Architecture of the Internet, Intranet and Extranet, Intranet software, Applications of Intranets, Intranet Application Case Studies, Considerations in Intranet Deployment, The Extranets, The structures of Extranets, Extranet products & services, Applications of Extranets, Business Models of Extranet Applications, Managerial Issues.

Electronic Payment Systems : Is SET a failure, Electronic Payments & Protocols, Security Schemes in Electronic payment systems, Electronic Credit card system on the Internet, Electronic Fund transfer and Debit cards on the Internet, Stored - value Cards and E- Cash, Electronic Check Systems, Prospect of Electronic Payment Systems, Managerial Issues.

Unit– IV Public Policy: From Legal Issues to Privacy : EC- Related Legal Incidents, Legal Incidents, Ethical & Other Public Policy Issues, Protecting Privacy, Protecting Intellectual Property, Free speech, Internet Indecency & Censorship, Taxation & Encryption Policies, Other Legal Issues: Contracts, Gambling & More, Consumer & Seller Protection In EC.

Unit – V Infrastructure For EC : It takes more than Technology, A Network Of Networks, Internet Protocols, Web- Based client/ Server, Internet Security, selling on the web, Chatting on the Web, Multimedia delivery, Analyzing Web Visits, Managerial Issues.

Referential Books:

1. David Whiteley, " E-Commerce", Tata McGraw Hill, 2000.
2. Eframi Turban, Jae Lee, David King, K. Michale Chung, "Electronic Commerce", Pearson Education, 2000

BCA-604 Knowledge Management

- Unit – I Business Intelligence and Business Decisions:** Modeling Decision Process; Decision support systems; Group decision support and Groupware Technologies.
- Unit – II Executive Information and support Systems:** Business Expert System and AI, OLTO & OLAP; Data Warehousing; Data Marts, Data Warehouse architecture; Tools for data warehousing.
- Unit– III Multi- Dimensional analysis:** Data mining and knowledge discovery; Data mining and Techniques; Data mining of Advance Databases.
- Unit– IV Knowledge Management Systems:** Concept and Structure KM systems, techniques of knowledge management appreciation & limitation.

Referential Books:

1. Decision support system, EIS, 2000 .
2. W.H.Inmon, "Building Data Warehousing", Willey, 1998.
3. Han, Jiawei, Kamber, Micheline, " Data Mining Concepts & Techniques", Harcourt India, 2001

BCA-605P Major Project

Evaluation will be based on held after fourth semester and will be Conducted by the college committee only.

BCA-606P Presentation/Seminar based on Major Project

Presentation/Seminar based on Major Project will be evaluated by external examiner only.