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CHAUDHARY CHARAN SINGH UNIVERSITY, MEERUT  
THREE YEARS BACHELOR OF COMPUTER APPLICATION PROGRAMME

**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-SMMPV11 Communication Facility, SNMPV3.
- Unit – VI System Security:** Intruders, Viruses and Relate 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.

- 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.White., 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- Knowledge Management

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

### Refer Books:

1. Decision support system, EIS, 2000 .
2. Wilson, "Building Data Warehousing", Willey, 1998.
3. Hanawei, Kamber, Michelineal, " Data Mining Concepts & Techniques", Harcourt India, 2000.

### BCA- Major Project

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

### BCA- Presentation/Seminar based on Major Project

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