Introduction to Cyber Security

Value Added Course [3 Credit Theory=45 hours]

Course Objectives:

1. To inform about the significance of cyber-crime, tools and methods regarding security aspects.
2. To instruct about social networking, fundamental Operating system security, and device security best practises.
3. To introduce the concepts of Web Application Security Methodologies and Strategic Management.

MODULE I [15 Hours]

Introduction to Cyber Crime, tools and methods for Security aspects

Overview of Computer and Web Technology, Origin of Internet, World Wide Web, Cyber Space & Crime, Cyber Challenges, Information and Data Security, Introduction to Ethical Hacking, Ethics and Cyber Laws, Concept of web browsers and web crawler, Various Attacks and malwares (virus, worm, spyware, Trojan horse), phishing, Policies of Antivirus, Encryption and Decryption policies, Public and Private keys, RSA, Digital Signature, Strategic policies for Password.

MODULE II [15 Hours]

Threat Detection of Device Security Management for Social Media and Methodologies

Intrusion Detection system (IDS) and Intrusion Prevention System (IPS), Social Media Marketing, Defense tools for social media security, Significance of Applet over Security, Basics of Networking, Basic Security for Windows , Block diagram of smart phones, Desktop Security, Mobile Security, Wi-Fi Security, Stateful and Stateless firewall, Linux firewall and Windows firewall, Cyber Security Acts and Law in India.

MODULE III [15 Hours]

Strategic Management of E-Commerce and Digital Payment

Concept of HTTP and HTTPS, Basics of E-commerce and M-commerce and its Components, Internet and Mobile Banking Security, Rules of usage of Debit and Credit Card, Guidelines of UPI Security, Mobile wallet and e-wallet, Digital Forensic, Issues of Governance, Risk and Compliance, RBI guidelines for digital payments and Customer Protection.

Suggested Readings:

- Pandey, Jatindra, Introduction to Cyber security, Sage Publications.
- Dhar, P., Fundamentals of Information Technology in Business, Abhijay Publication.
- Sinha, P.K., Fundamentals of Computer and IT.
- Sarkar, A., Santra, S., Jana, S., Basics of Cyber Security, U. N. Dhur & Sons (P) Ltd. (In Press)