



## **BIT-403**

### **INFORMATION SECURITY**

#### **UNIT- I**

**Introduction:** History, critical characteristics of information, NSTISSC security model, Components of an information system, Securing the components, balancing security and access, The SDLC, The security SDLC

**Need for Security:** Business needs, Threats, Attacks-secure software development

#### **UNIT-II**

**Legal, Ethical and Professional Issues:** Law and ethics in information security, relevant U.S laws- international laws and legal bodies, Ethics and information security

**Risk Management:** Overview, Risk Identification, risk assessment, Risk Control strategies, selecting a risk control strategy, Quantitative versus qualitative risk control practices, Risk management discussion points, recommended risk control practices

#### **UNIT-III**

**Planning for Security:** Security policy, Standards and practices, Security blue print, Security education, Continuity strategies.

**Security Technology:** Firewalls and VPNs: Physical design, firewalls, protecting remote connections.

#### **UNIT-IV**

**Security Technology:** Intrusion detection, Access control and other security tools: Intrusion

detection and prevention systems, Scanning and analysis tools, Access control devices.

**Cryptography:** Foundations of cryptology, cipher methods, cryptographic Algorithms, Cryptographic tools, Protocols for secure communications, Attacks on cryptosystems

## UNIT-V

**Implementing Information Security:** information security project management, technical topics of implementation , Non- technical aspects of implementation, Security certification and accreditation

**Security and Personnel:** Positioning and staffing security function, Employment policies and practices, internal control strategies.

**Information security Maintenance:** Security management models. The maintenance model, Digital forensics

### Suggesting Reading:

1. Michael E. Whitman and Hebert J Mattord, Principles of Information Security, 4th edition  
Ed. Cengage Learning 2011
2. Thomas R Peltier, Justing Peltier, John Blackley, Information Security. Fundamentals, Auerbacj Publications 2010
3. Detmar W Straub, Seymor Goodman, Richard L Baskerville, Information Security. Policy proceses and practices PHI 2008
4. Marks Merkow and Jim Breithaupt, Information Security. Principle and Practices, Pearson Education, 2007.