

IT8073 INFORMATION SECURITY

DETAILED SYLLABUS

OBJECTIVES:

- To understand the basics of Information Security
- To know the legal, ethical and professional issues in Information Security
- To know the aspects of risk management
- To become aware of various standards in this area
- To know the technological aspects of Information Security

UNIT I INTRODUCTION

History, what is Information Security? Critical Characteristics of Information, NSTISSC Security Model, Components of an Information System, Securing the Components, Balancing Security and Access, The SDLC, The Security SDLC

UNIT II SECURITY INVESTIGATION

Need for Security, Business Needs, Threats, Attacks, Legal, Ethical and Professional Issues - An Overview of Computer Security - Access Control Matrix, Policy-Security policies, Confidentiality policies, Integrity policies and Hybrid policies

UNIT III SECURITY ANALYSIS

Risk Management: Identifying and Assessing Risk, Assessing and Controlling Risk - Systems: Access Control Mechanisms, Information Flow and Confinement Problem

UNIT IV LOGICAL DESIGN

Blueprint for Security, Information Security Policy, Standards and Practices, ISO 17799/BS 7799, NIST Models, VISA International Security Model, Design of Security Architecture, Planning for Continuity

UNIT V PHYSICAL DESIGN

Security Technology, IDS, Scanning and Analysis Tools, Cryptography, Access Control Devices, Physical Security, Security and Personnel

TEXT BOOK:

1. Michael E Whitman and Herbert J Mattord, —Principles of Information Securityll, Vikas Publishing House, New Delhi, 2003

REFERENCES

1. Micki Krause, Harold F. Tipton, — Handbook of Information Security Managementll, Vol 1-3 CRC Press LLC, 2004.
2. Stuart McClure, Joel Scrambray, George Kurtz, —Hacking Exposedll, Tata McGraw- Hill, 2003
3. Matt Bishop, — Computer Security Art and Sciencell, Pearson/PHI, 2002.