ZENUS INFOTECH INDIA PVT. LTD.
CURRICULUM OF CYBER SECURITY

Course Duration: 6/8 Weeks*

Networking Concepts Overview

Basics of Communication Systems

Transmission Media

ISO/OSI and TCP/IP Protocol Stacks

Local Area Networks

Wide Area Networks

Internetworking

Packet Formats

Wireless Networks

The Internet

Information Security Concepts

Information Security Overview

Information Security Services

Types of Attacks

Goals for Security

E-commerce Security

Computer Forensics

Steganography

Security Engineering

Security Threats and vulnerabilities

Overview of Security threats

Hacking Techniques

Password Cracking

Insecure Network connections

Malicious Code

Programming Bugs

Cybercrime and Cyber terrorism

Information Warfare and Surveillance

Cryptography

Introduction to Cryptography

Symmetric key Cryptography

Asymmetric key Cryptography

Message Authentication and Hash functions

Digital Signatures

Public Key infrastructure

Diffe-Hellman key exchange proptocol

Applications of Cryptography

Security Management

Module1: Security Management Practices

Overview of Security Management

Information Classification Process

Security Policy

Risk Management

Security Procedures and Guidelines

Business Continuity and Disa ster Recovery

Module2: Security Laws and Standards

Security Assurance

Security Laws

International Standards

Security Audit

OCTAVE approach

SSE-CMM Unit 3:

Network Security

Module 1: Access Control and Intrusion Detection

Overview of Identification and Authorization

I & A Techniques

Overview of IDS

Intrusion Detection Systems and Intrusion Prevention Systems

Module 2: Server Management and Firewalls

User Management

DNS Routing and Load Balancing

Overview of Firewalls

Types of Firewalls

DMZ and firewall features

Module 3: Security for VPN and Next Generation Networks

VPN Security

Security in Multimedia Networks

Fax Security

Link Encryption Devices

System and Application Security

Module 1: Security Architectures and Models

Designing Secure Operating Systems

Controls to enforce security services

Information flow model and Biba model

Module 2: System Security

Desktop Security

email security: PGP and SMIME

Web Security: web authentication, SSL and SET

Module 3: OS Security

OS Security Vulnerabilities, updates and patches

OS integrity checks

Anti-virus software

Design of secure OS and OS hardening

Configuring the OS for security

Trusted OS