

# **Cyber Security Professional Basic course**

## **Contents**

Preface

## **Course Contents**

### **Module 1 - Cyber Security**

- Cyberspace
- Cyber Security
- Password
- Common Passwords
- Endpoint Security
- Creating a Password
- Table 1: Tips for Password Management

### **Module 2 - Calculations - Computation – Communication**

- Calculations
- Computing
- Communications
  - Internet
  - Ethernet
  - Email
  - Modem/ Router
  - World Wide Web
  - Internet and www

### **Module 3 - Essentials of Cyber Security; Security Concept**

- Cyber Security and Information Security
- Fundamentals of Information Assurance
  - Authentication.
  - Authorization.
  - Non repudiation.
- Concept of CIA Triad
  - Confidentiality
  - Integrity
  - Availability

### **Module 4 - Functioning of Internet and Network Layers**

- Internet Protocol Address
- Domain Name System
  - Structure of DNS
- Layered Architecture of Networks

- Actions on the Internet after Clicking a Link

### **Module 5 - Basic Threats and Vulnerabilities Part -I**

- Threats through Emails
  - Spam
  - Social Engineering
  - Phishing email
  - Spear phishing
  - Whaling
  - Baiting
  - Pretexting
  - Email Spoofing
- Malicious Codes or Malware Threats
- Threat Classification

### **Module 6 - Basic Threats and Vulnerabilities Part -II**

- Virus
- Virus Grouping
  - Resident and Nonresident Virus
  - File Infector Virus
  - Overwriting Virus
  - Boot Sector Virus.
  - Master Boot Record Virus
  - Multipartite Virus
  - Cluster Virus.
  - Polymorphic virus.
  - Rootkit virus.
  - Macro Virus.
  - Web Scripting Virus
  - Notable Examples of Virus

### **Module 7 - Basic Threats and Vulnerabilities Part - III**

- Worms
- Classification of Worms
  - Email worms.
  - Internet worms.
  - File-sharing Networks Worms.
  - Instant Message and Chat Room Worms
- Trojan

- Table 2: How do you find out when your system is infected?  
Symptoms
- Table 3: Defence Against Computer Infection

### **Module 8 – Additional Threats and Vulnerabilities**

- Spyware
- Types of Spyware
  - Domestic Spyware
  - Commercial Spyware
- Botnets

### **Module 9 - Exploitation: Threats and Vulnerabilities**

- SQL Injections
- Buffer Overflow
- Cross Site Scripting

### **Module 10 - New Trends in Cyber Threats and Attacks**

- Actors on the Scene.
- Possible Targets.
- Advanced Persistent Threat.
  - Phases of Advanced Persistent Threat Attack.
  - Mitigation of APT attacks
- Blended Threats.
- DoS (Denial of Service) Attack.
- Ransomware.
- Insider Threats and Attacks