

Cyber Security - 15 Days

Introduction of Networking

Introduction to Cyber Security

- Introduction to Basic Concepts of Cyber Security
- Need for Cyber Security
- Introduction to Cyber Security Threats
- Phishing, Spyware, Malware, Ransomware, BOT, BOTnet etc
- Latest Cyber Security Threats like APT

Classification of Cyber Security Threats

- User Induced
- System Induced
- Common Threats related to Stand Alone Computers (Desktops/ Laptops)
- Common Threats associated with Networked Devices (Internet and Intranet)
- Threats associated with wireless Smart Devices (Smart Phones, Smart Watches, Tablets)
- Threats associated with use of portable devices
- Threats associated with use of Public WiFi networks

Cryptography & PKI

- Cryptography basics
- Requirements for cryptography
- Different types of ciphers
- Caesar Cipher
- Hill Cipher
- Vernam Cipher
- DES
- RSA
- Hash Functions & Digital Signatures
- Authentication functions-Message authentication codes
- Hash functions-Hash Algorithms (MD5, Secure Hash Algorithm)
- Digital signatures (Digital signature Standards)

Measures to identify and mitigate cyber security threats

- Physical Measures
- Cyber security tools
- Type and methods of hacking and counter measures
- Best Practices
- Do's/ Don'ts
- Password Attacks
- Distributed Denial of Services (DDoS)
- Man-in-Middle Attacks
- Phishing and Spoofing attacks
- Cross Site Scripting
- SQL Injection
- Malware Attacks

Network Security

- Packet Filtering
- Stateful Inspection Firewall
- NextGen Firewall app controls
- Web Application Fire Wall (WAF)
- Network Access Control (NAC)
- Common Threats associated with Networks
- Militarized Zone (MZ) and De-militarized zone (DMZ) concepts
- Introduction to Wireshark
- Create a filters for data collection and display
- Examine real-world packet captures
- Introduction to IDS and IPS
- IDS /IPS
- VPN –Introduction
- VPN protocols/characteristics
- VPN Functions
- VPN connectivity for client and server
- IPSec
- Tunnel mode/transport mode
- Introduction to UTM
- UTM Configuration