

Cyber Security - Network Security

Introduction

Cybersecurity is the practice of protecting critical systems and sensitive information from digital attacks. Also known as information technology (IT) security, cybersecurity measures are designed to combat threats against networked systems and applications, whether those threats originate from inside or outside of an organization. Network security is the protection of the underlying networking infrastructure from unauthorized access, misuse, or theft. It involves creating a secure infrastructure for devices, applications, users, and applications to work in a secure manner. Network security combines multiple layers of defenses at the edge and in the network. Each network security layer implements policies and controls. Authorized users gain access to the network but malicious actors are blocked from carrying out exploits and threats. This certification is to learn the threats associated with security and techniques of network security.

REQUIREMENTS:

- Intermediate/O/A-level
- Basic Programming Skills
- Basic Computer Skills

CURRICULUM:

Week	Lecture	Topics
1	1	• Introduction to Security • Need for security • Security attacks, Services and Mechanisms • Network Security
2	2	• Symmetric Ciphers • Substitution Transposition Technique • Block Cipher • DES
3	3	• Public Key Cryptography • RSA Algorithm • Key Distribution and Management • Diffie-Hellman Key Exchange
4	4	• Authentication • Authentication Requirements • Message Authentication Codes
5	5	• Biometric Authentication • Hashes

6	6	MID TERM PROJECT
7	7	• MD5 & SHA
8	8	• Kerberos
9	9	• Firewalls • Web Security
10	10	• IP Security • VPN
11	11	• Intrusion Detection • TLS • SSL
12	12	FINAL TERM PROJECT

Outcomes:

- Identify network security risks and threats
- Learn Network security controls and techniques.

BENEFITS:

- Ability to describe network-associated security threats.
- Describe social networking and evaluate associated risks.
- Evaluate network security vulnerabilities.
- Identify network security controls and risk mitigation techniques.

Affiliation & Collaboarations

