

Course Description:

This course provides the student with an understanding of the fundamental tenants of network security and covers the general concepts involved in maintaining a secure network computing environment. Upon successful completion of this course, students will be able to examine, describe general networking and security fundamentals as well as implement basic network security platform configuration techniques.

Course Domains:

- The Inter-connected Globe
- Physical and Logical Addressing
- Packet Encapsulation and Lifecycle
- Network and Endpoint Security
- Networking Concepts and Security Principles
- Zero Trust and Zero-Trust Network Access
- Network Security Platform - SASE

Course Objectives:

- Identify the most common enterprise network devices.
- Differentiate between routed and routing protocols.
- Recognize the various types of area networks and topologies.
- Describe the Domain Name System DNS, FQDN, and IoT.
- Recognize decimal binary, and hexadecimal conversion methods.
- Describe the structure and fields of an IP header, IPV4, and IPV6 addresses.
- Subnet IPV4 address schemes and configure an IP address on the firewall.
- Review DHCP process messages and Network Address Translation (NAT).
- Setup the firewall as a DHCP server and test the DHCP client.
- Recognize packet encapsulation and the lifecycle process.
- Identify protocols and define the OSI and TCP model layers.
- Review the transport layer protocols, ports, and packet filtering procedures.
- Create and analyze packet captures using Wireshark.
- Classify various endpoint and network security technologies.
- Identify common security encryption algorithms and key management concepts.
- Generate a Self-Signed Root Certificate Authority (CA) certificate.
- Create a decryption policy on the firewall to decrypt SSH traffic and SSL traffic.
- Describe the benefits of the next generation firewall single pass architecture.
- Identify the NGFW App-ID, User-ID, Content-ID and deployment options.
- Explore the five steps required to implement a NGFW zero-trust environment.
- Configure the NGFW to monitor, forward, and backup system logs (Syslog)
- Define SASE and describe SASE features and functions.
- Understand the concepts and values of Software-Defined WAN - SDWAN.