

Perimeter Defense

2023-2024 Catalog

[ARCHIVED CATALOG]

CSIA 215 - Perimeter Defense

PREREQUISITES: [NETI 115](#) [NETI 115 - Routing and Switching](#)

PROGRAM: Cyber Security/Information Assurance

CREDIT HOURS MIN: 3

LECTURE HOURS MIN: 2

LAB HOURS MIN: 2

DATE OF LAST REVISION: Fall 2021

Provides an advanced understanding of the concepts involved in firewalls, routers, intrusion detection, intrusion prevention and Virtual Private Networks (VPNs) in relationship to the overall enterprise network strategy. Students will learn advanced network security installation techniques; advanced network security troubleshooting; and how to make intelligent choices in firewall and router technology. Additionally, the students will have a comprehensive look at the use of routers and switches with other network security components in configuring De-Militarized Zones (DMZ) and VPNs for optimal perimeter security. Students will study such topics as packet filtering, proxy servers, authentication, encryption, and securing host computers.

MAJOR COURSE LEARNING OBJECTIVES: Upon successful completion of this course the student will be expected to:



1. Explain network threats, mitigation techniques, and the basics of securing a network.
2. Secure administrative access on the network and routers with standard Authorization, Authentication, and Accounting principles.
3. Implement firewall and proxy server technologies to secure the network perimeter.
4. Configure Intrusion Prevention/Detection Systems to mitigate attacks on the network.
5. Demonstrate understanding of packet filtering
6. Describe LAN security considerations and implement endpoint and Layer 2 security features.
7. Describe methods for protecting data confidentiality, integrity, and availability.
8. Demonstrate understanding of wireless networks and the security risks that a wireless environment will bring to an organization.
9. Implement secure virtual private networks.
10. Create and implement a comprehensive security policy.

11. Implement the use of Network Address Translation to meet the security needs of an enterprise.
12. Explain the importance of ongoing security management.

COURSE CONTENT: Topical areas of study include -

- Firewall
- DMZ
- Intrusion Prevention Detection Systems
- Security policies and procedures
- Authorization, Authentication, and Accounting
- LAN Security
- NAT
- VPN
- WLAN
- Confidentiality, Integrity, and Availability
- Packets
- Filtering

GRADING POLICY

A.....90-100

B.....80-89

C.....70-79

D.....60-69

F.....0-59



[Course Addendum - Syllabus \(Click to expand\)](#)
