



Course Information:

Course # - Course Title: NWIT245 – Defending the Network

Course Format: Lectures, discussions, weekly labs, team exercises

Class Day/Time:

Semester Period:

Location:

Instructor Contact Information:

Name:

Email:

Physical Office Hours:

Virtual Office Hours:

Montgomery College Course Description:

This course examines the critical defensive technologies needed to secure network perimeter. The text includes coverage of network security threats and goals, advanced TCP/IP concepts, router security, IDS/IPS, firewall design & configuration, VPN, and wireless network design and security, and much more.

Specific topic coverage includes:

- Network Defense Fundamentals
- Advanced TCP/IP
- Router Fundamentals
- Fundamentals of Cisco Router Security
- Designing Firewalls
- Configuring Firewalls
- Managing Firewalls to Improve Security
- Implementing IPsec and Virtual Private Networks
- Designing Virtual Private Networks
- Intrusion Detection System Concepts
- Configuring and Using Intrusion Detection Systems
- Wireless Network Fundamentals
- Securing Wireless Networks

Common Course Student Learning Outcomes

Upon the completion of this course, students will be able to:

- Describe the various components of a network, including clients and servers, routers, firewalls, IDSs, VPNs, and antivirus and how they are configured to be a part of a network.
- Identify the role of each network component (including clients and servers, routers, firewalls, IDSs, VPNs, and antivirus) in defending a network.
- Explain how to harden devices in a network and test the effectiveness of various security measures.
- Identify the key features and functions of hardening devices to secure the network.
- Secure routers via access control lists and logging options.

Required Materials:

Textbook: Randy / Dawn Weaver; Dean Farwood, Guide to Network Defense and Countermeasures, 3rd Edition. 2014. ISBN-10: 1133727948. ISBN-13: 9781133727941

Lab Manual: The instructor will also provide instructions for weekly hands-on.

Lab Use: Yes

MC Bookstore: <http://www.montgomerycollege.edu/bookstore>

Evaluation:

Weekly Hands-On Labs.....	20 Points
Hands-On Quizzes	40 Points
Midterm and Final Exams	40 Points
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Total Available Points	100 Points

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