



BROWARD COMMUNITY COLLEGE

COURSE OUTLINE

LAST REVIEW: 2006-07 NEXT REVIEW: 2011-2012 STATUS: A

COURSE TITLE: Cisco Fundamentals of Network Security 2

COMMON COURSE NUMBER: CET 2667C

CREDIT HOURS: 3

CONTACT HOUR BREAKDOWN

(per 16 week term)

CLOCK HOURS:

(Voc. Course ONLY)

Lecture: 40

Lab: 8

Clinic: 0

Other: 0

PREREQUISITE(S): CET 2660C

COREQUISITE(S):

PRE/COREQUISITE(S):

COURSE DESCRIPTION: *(600 characters, maximum)*

Introductory Network Security course focusing on the overall security processes with particular emphasis on hands on skills in the following areas:

- Security policy design and management
- Security technologies, products and solutions
- Firewall and design, installation, configuration, and maintenance
- AAA implementation using PIX Security Appliances
- Intrusion Detection (IDS) implementation using PIX Security Appliances
- VPN implementation using PIX Security Appliances

UNIT TITLES

1. PIX Firewall
2. Translations and Connections
3. Access Control Lists for the PIX Firewall
4. AAA on PIX Firewalls
5. PIX IDS
6. PIX Failover and System Maintenance
7. PIX VPN
8. PIX Device Manager



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UNITS

Unit 1 PIX Firewall

General Outcome:

1.0 The student shall be able to setup a PIX firewall.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 1.1 Present an Introduction to Firewalls
- 1.2 Describe The Cisco PIX Security Appliance
- 1.3 Explain Getting Started - User interface
- 1.4 Set up Routing and Multicast Configuration
- 1.5 Employ PIX Dynamic Host Configuration Protocol (DHCP)



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Unit 2 Translations and Connections

General Outcome:

2.0 The student shall understand translations and connections.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 2.1 Discuss Transport Protocols
- 2.2 Explain Network Address Translations
- 2.3 Configure DNS Support
- 2.4 Explain Connections
- 2.5 Explain Port Address Translation (PAT)
- 2.6 Set up Multiple Interfaces on a PIX Security Appliance



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Unit 3 Access Control Lists for the PIX Firewall

General Outcome:

3.0 The student shall be able to use access lists for PIX firewalls.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

3.1 Describe Access Control Lists and the PIX Security Appliance

3.2 Use ACLs

3.3 Perform Filtering

3.4 Employ Object Grouping

3.5 Use Nested Object Groups



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Unit 4 AAA on PIX Firewalls

General Outcome:

4.0 The student shall be able to use AAA on PIX firewalls.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

4.1 Discuss AAA

4.2 Set up Authentication Configuration

4.3 Prepare Authorization and Accounting Configuration

4.4 Explain the use of PPPoE and the PIX Security Appliance



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Unit 5 PIX IDS

General Outcome:

5.0 The student shall be able to perform PIX intrusion detection.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 5.1 Discuss Advanced Protocols
- 5.2 Use Multimedia Support
- 5.3 Set up Attack Guards
- 5.4 Implement Intrusion Detection
- 5.5 Explain Shunning
- 5.6 Perform Syslog Configuration on the PIX
- 5.7 Employ SNMP



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Unit 6 PIX Failover and System Maintenance

General Outcome:

6.0 The student shall be able to employ PIX failover and perform system maintenance.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

6.1 Understand Failover

6.2 Explain Serial Cable Failover Configuration

6.3 Discuss LAN-Based Failover

6.4 Perform System Maintenance via Remote Access

6.5 Use Command Authorization

6.6 Perform PIX Security Appliance Password Recovery and Upgrades



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Unit 7 PIX VPN

General Outcome:

7.0 The student shall be able to setup a PIX VPN.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

7.1 Explain how the PIX Security Appliance Enables a Secure VPN

7.2 List the Tasks to Configure VPN

7.3 Perform Task 1 - Prepare to Configure VPN Support
14.3.1 Step 1 - prepare for IKE

7.4 Perform Task 2 - Configure IKE Parameters

7.5 Perform Task 3 - Configure IPSec Parameters

7.6 Perform Task 4 - Test and Verify VPN Configuration

7.7 Employ the Cisco VPN Client

7.8 Scale PIX Security Appliance VPNs



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Unit 8 PIX Device Manager

General Outcome:

8.0 The student shall be able to use PIX Device Manager.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 8.1** Use PIX Security Appliance Management Tools
- 8.2** Employ The Cisco PIX Device Manager
- 8.3** Plan Preparation for PDM
- 8.4** Use PDM to Configure the PIX Security Appliance
- 8.5** Use PDM to Create Site-to-Site VPNs 15.5.1 Overview
- 8.6** Use PDM to Create Remote Access VPNs
- 8.7** Perform Enterprise PIX Firewall Management