

# Managing a Cisco PIX Firewalls

## Course Outcome Summary

### Course Information

<b>Organization</b>	Madison Area Technical College
<b>Developers</b>	Nina Milbauer
<b>Development Date</b>	3/13/2006
<b>Course Number</b>	10-150-194
<b>Instructional Level</b>	Associate Degree
<b>Potential Hours of Instruction</b>	72
<b>Total Credits</b>	4

### Description

Introduces the network security specialist to the various methodologies for defending a network. Students are introduced to the concepts, principles, types and topologies of firewalls to include packet filtering, proxy firewalls, application gateways, circuit gateways and stateful inspection. Students also learn the skills necessary for one of the CISCO Certified Security Professional (CCSP) certification exam.

### Target Population

Information Technology students seeking an Associate Degree in Network Security Specialist or Network Specialist.

### Types of Instruction

Instruction Type	Contact Hours	Credits
Classroom Presentation	36	2
On Campus Lab	36	2

### Textbooks

*Cisco Curriculum*. **Source:** <http://cisco.netacad.net>.

### Prerequisites

10-150-172 (Networking and Communications 2)

### Competencies

- A. **Explain vulnerabilities, threats and attacks**  
**You will demonstrate your competence:**
- A.1. by participating in the class
  - A.2. by completing lab manual assignment
  - A.3. by examination
  - A.4. using a business scenario
- Your performance will be successful when:**
- A.1. you complete your lab manual assignment correctly

A.2. you enter into class discussions about vulnerabilities of a security appliance firewall and protecting against them

A.3. you enter into class discussions about threats and attacks on a network and protecting against them

A.4. you attend class regularly

A.5. you arrive for class on time

A.6. you listen attentively during class

**B. Determine security planning and policies**

**You will demonstrate your competence:**

B.1. by participating in the class

B.2. by completing lab manual assignment

B.3. using a business scenario

B.4. by examination

**Your performance will be successful when:**

B.1. you complete your lab manual assignment correctly

B.2. you enter into class discussions about network policies and protecting with them

B.3. you control access to network devices based on policies

B.4. you attend class regularly

B.5. you arrive for class on time

B.6. you listen attentively during class

**C. Compare security devices**

**You will demonstrate your competence:**

C.1. by participating in the class

C.2. by completing lab manual assignment

C.3. using a business scenario

C.4. by examination

**Your performance will be successful when:**

C.1. you complete your lab manual assignment correctly

C.2. you enter into class discussions about devices used to secure a network

C.3. you configure a firewall and assess the access to the firewall

C.4. you arrive for class on time

C.5. you attend class regularly

C.6. you listen attentively during class

**D. Determine trust and identity technology**

**You will demonstrate your competence:**

D.1. by participating in the class

D.2. by completing lab manual assignment

D.3. using a business scenario

D.4. by examination

**Your performance will be successful when:**

D.1. you complete your lab manual assignment correctly

D.2. you enter into class discussions about technologies to authenticate users and devices

D.3. you configure trust and identity at layer 2

D.4. you configure trust and identity at layer 3

- D.5. you attend class regularly
- D.6. you arrive for class on time
- D.7. you listen attentively during class

**E. Configure and secure an access control server**

**You will demonstrate your competence:**

- E.1. by participating in the class
- E.2. by completing lab manual assignment
- E.3. using a business scenario
- E.4. by examination

**Your performance will be successful when:**

- E.1. you complete your lab manual assignment correctly
- E.2. you enter into class discussions about access control servers
- E.3. you configure an access control server based on a business scenario
- E.4. you arrive for class on time
- E.5. you attend class regularly
- E.6. you listen attentively during class

**F. Determine filtering on a router**

**You will demonstrate your competence:**

- F.1. by participating in the class
- F.2. by completing lab manual assignment
- F.3. using a business scenario
- F.4. by examination

**Your performance will be successful when:**

- F.1. you complete your lab manual assignment correctly
- F.2. you enter into class discussions about using filtering technologies on a router
- F.3. you configure a router with filtering technologies based on a business scenario
- F.4. you attend class regularly
- F.5. you arrive for class on time
- F.6. you listen attentively during class

**G. Compare filtering on a security appliance**

**You will demonstrate your competence:**

- G.1. by participating in the class
- G.2. by completing lab manual assignment
- G.3. using a business scenario
- G.4. by examination

**Your performance will be successful when:**

- G.1. you complete your lab manual assignment correctly
- G.2. you enter into class discussions about vulnerabilities of a security appliance firewall and protecting against them
- G.3. you configure a firewall and assess the access to the firewall
- G.4. you attend class regularly
- G.5. you arrive for class on time
- G.6. you listen attentively during class

**H. Configure filtering on a switch**

**You will demonstrate your competence:**

- H.1. by participating in the class
- H.2. by completing lab manual assignment
- H.3. using a business scenario
- H.4. by examination

**Your performance will be successful when:**

- H.1. you complete your lab manual assignment correctly
- H.2. you enter into class discussions about vulnerabilities of a switch and protecting against them
- H.3. you configure a switch to defend from layer 2 attacks
- H.4. you arrive for class on time
- H.5. you attend class regularly
- H.6. you listen attentively during class

**I. Setup and Secure a security appliance or firewall**

**You will demonstrate your competence:**

- I.1. by participating in the class
- I.2. by completing lab manual assignment
- I.3. using a business scenario
- I.4. by examination

**Your performance will be successful when:**

- I.1. you complete your lab manual assignment correctly
- I.2. you enter into class discussions about vulnerabilities of a security appliance or firewall and protecting against them
- I.3. you configure a firewall and assess the access to the firewall
- I.4. you attend class regularly
- I.5. you arrive for class on time
- I.6. you listen attentively during class