

I. CATALOG INFORMATIONA. Discipline: COMPUTER NETWORKING SYSTEMS ENGINEERING (CNSE)B. Subject Code and Number: CNSE M85BC. Course Title: Cisco Fundamentals of PIX Firewalls

D. Credit Course units:

Units: 3Lecture Hours per week: 2Lab Hours per week : 3Variable Units : No

E. Student Learning Hours:

Lecture Hours:

Classroom hours: 35

Laboratory/Activity Hours:

Laboratory/Activity Hours 52.5**Total Combined Hours** in a 17.5 week term: 87.5 - 0

F. Non-Credit Course hours per week _____

G. May be taken a total of: 1 2 3 4 time(s) for creditH. Is the course co-designated (same as) another course: No Yes

If YES, designate course Subject Code & Number: _____

I. Course Description:

Provides an in-depth introduction to Cisco Private Internet Exchange (PIX) Firewall technology. Topics of PIX Firewall include translations and connections, Access Control Lists (ACLs), Authentication, authorization, Accounting (AAA), advanced protocols and intrusion detection, Virtual Private Network (VPN), and management. Covers the second half of the Cisco Fundamentals of Network Security Curriculum. Prepares students for Cisco Secure PIX Firewall exam (CSPFA 642-521).

Field trips are not required for this course.

J. Entrance Skills

*Prerequisite: No Yes Course(s)CNSE M18*Corequisite: No Yes Course(s)

Limitation on Enrollment: No Yes

Recommended Preparation: No Yes Course(s)

Other:

No Yes

K. Other Catalog Information:

II. COURSE OBJECTIVES

Upon successful completion of the course, a student will be able to:

		Methods of evaluation will be consistent with, but not limited by, the following types or examples.
1	Describe the capabilities of the PIX Firewall family.	
2	Explain how the PIX Firewall interacts with network traffic.	
3	Demonstrate how PIX Firewall handles access lists.	
4	Demonstrate how to configure, monitor, and troubleshoot AAA configurations in the PIX Firewall.	
5	Describe PIX Firewall protocol recognition and Intrusion Detection System capabilities.	
6	Discuss the difference between stateful and non-stateful failover.	
7	Describe the configuration of VPN.	
8	Discuss PIX management tools.	

III. COURSE CONTENT

Estimated %	Topic	Learning Outcomes
Lecture (must total 100%)		
12.00%	PIX (Private Internet Exchange) Firewall	1
12.00%	PIX Firewall Translations and Connections	2
12.00%	PIX Firewall ACLS (Access Control Lists)	3
12.00%	PIX Firewall AAA (Authentication, authorization, Accounting)	4
12.00%	PIX Firewall Advanced Protocols and Intrusion Detection	5
12.00%	PIX Firewall Failover and System Maintenance	6
16.00%	PIX Firewall VPN (Virtual Private Network)	7
12.00%	PIX Firewall Management	8

IV. TYPICAL ASSIGNMENTS

A. Writing assignments

Writing assignments are required. Possible assignments may include, but are not limited to:

- | | |
|---|--|
| 1 | <ol style="list-style-type: none"> 1. Short answer class assignments. 2. Term papers of course-related topics. |
|---|--|

B. Appropriate outside assignments

Appropriate outside assignments are required. Possible assignments may include, but are not limited to:

- | | |
|---|---|
| 1 | <ol style="list-style-type: none"> 1. Assigned readings from text and other sources. 2. Assigned writings (see above section). 3. Field observations of network administration. 4. Assigned simulation from text. |
|---|---|

V. METHODS OF INSTRUCTION

Methods of instruction may include, but are not limited to:

- Distance Education – When any portion of class contact hours is replaced by distance education delivery mode (Complete DE Addendum, Section XV)
- Lecture/Discussion
- Laboratory/Activity
- Other (Specify)
Online materials, assigned Internet research, and computer simulations.
- Optional Field Trips
- Required Field Trips

VI. METHODS OF EVALUATION

Methods of evaluation may include, but are not limited to:

- | | | |
|--|---|---|
| <input type="checkbox"/> Essay Exam | <input checked="" type="checkbox"/> Classroom Discussion | <input checked="" type="checkbox"/> Skill Demonstration |
| <input checked="" type="checkbox"/> Problem Solving Exam | <input checked="" type="checkbox"/> Reports/Papers/Journals | <input type="checkbox"/> Participation |
| <input checked="" type="checkbox"/> Objective Exams | <input checked="" type="checkbox"/> Projects | <input checked="" type="checkbox"/> Other (specify) |

Assess troubleshooting skills in a Lab environment

VII. REPRESENTATIVE TEXTS AND OTHER COURSE MATERIALS

Cisco Networking Academy Program. The Fundamentals of Network Security Companion Guide. Cisco Press, 2003.

Cisco Networking Academy Program. Fundamentals of Network Security Lab Companion Workbook. Cisco Press, 2003.

VIII. STUDENT MATERIALS FEES

- No Yes

IX. PARALLEL COURSES

College	Course Number	Course Title	Units
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X. MINIMUM QUALIFICATIONS

Courses Requiring a Masters Degree:
 Associate Degree in Electronics, Computer Networking, or Electronic Engineering + 6 years networking experience + CCNA certification.

XI. ARTICULATION INFORMATION

A. Title V Course Classification:

1. This course is designed to be taken either:

- Pass/No Pass only (no letter grade possible); or
- Letter grade (P/NP possible at student option)

2. Degree status:

Either Associate Degree Applicable; or Non-associate Degree Applicable

B. Moorpark College General Education:

1. Do you recommend this course for inclusion on the Associate Degree General Education list?

Yes: No: If YES, what section(s)?

- A1 - Natural Sciences - Biological Science
- A2 - Natural Sciences - Physical Science
- B1 - Social and Behavioral Sciences - American History/Institutions
- B2 - Social and Behavioral Sciences - Other Social Behavioral Science
- C1 - Humanities - Fine or Performing Arts
- C2 - Humanities - Other Humanities
- D1 - Language and Rationality - English Composition
- D2 - Language and Rationality - Communication and Analytical Thinking
- E1 - Health/Physical Education
- E2 - PE or Dance
- F - Ethnic/Gender Studies

C. California State University(CSU) Articulation:

1. Do you recommend this course for transfer credit to CSU? Yes: No:

2. If YES do you recommend this course for inclusion on the CSU General Education list?

Yes: No: If YES, which area(s)?

- A1 A2 A3 B1 B2 B3 B4
- C1 C2 D1 D2 D3 D4 D5

D6 D7 D8 D9 D10 E

D. University of California (UC) Articulation:

1. Do you recommend this course for transfer to the UC? Yes: No:
2. If YES do you recommend this course for the Intersegmental General Education Transfer Curriculum (IGETC)? Yes: No:

IGETC Area 1: English Communication

- English Composition
- Critical Thinking-English Composition
- Oral Communication

IGETC Area 2: Mathematical Concepts and Quantitative Reasoning

- Mathematical Concepts

IGETC Area 3: Arts and Humanities

- Arts
- Humanities

IGETC Area 4: Social and Behavioral Sciences

- Anthropology and Archaeology
- Economics
- Ethnic Studies
- Gender Studies
- Geography
- History
- Interdisciplinary, Social & Behavioral Sciences
- Political Science, Government & Legal Institutions
- Psychology
- Sociology & Criminology

IGETC Area 5: Physical and Biological Sciences (mark all that apply)

- Physical Science Lab or Physical Science Lab only (non-sequence)
- Physical Science Lecture only (non-sequence)
- Biological Science
- Physical Science Courses
- Physical Science Lab or Biological Science Lab Only (non-sequence)
- Biological Science Courses
- Biological Science Lab course
- First Science course in a Special sequence
- Second Science course in a Special Sequence

Laboratory Activity

Physical Sciences

IGETC Area 6: Language other than English

Languages other than English (UC Requirement Only)

U.S. History, Constitution, and American Ideals (CSU Requirement ONLY)

U.S. History, Constitution, and American Ideals (CSU Requirement ONLY)

XII. REVIEW OF LIBRARY RESOURCES

A. What planned assignment(s) will require library resources and use?

The following assignments require library resources: Term papers.

B. Are the currently held library resources sufficient to support the course assignment?

YES: NO:

If NO, please list additional library resources needed to support this course.

XIII. PREREQUISITE AND/OR COREQUISITE JUSTIFICATION

CNSE M85B: Not Applicable

XIV. WORKPLACE PREPARATION

CNSE M85B: Not Applicable

XV. DISTANCE LEARNING COURSE OUTLINE ADDENDUM

CNSE M85B: Not Applicable

XVI. GENERAL EDUCATION COURSE OUTLINE ADDENDUM

CNSE M85B: Not Applicable

XVII. STUDENT MATERIALS FEE ADDENDUM

CNSE M85B: Not Applicable

XVIII. REPEATABILITY JUSTIFICATION TITLE 5, SECTION 55041

CNSE M85B: Not Applicable

XIX. CURRICULUM APPROVAL

Course Information:

Discipline:

COMPUTER NETWORKING SYSTEMS ENGINEERING (CNSE)

Discipline Code and Number: CNSE M85B

Course Revision Category: New Course

Course Proposed By:

Originating Faculty _____

Faculty Peer: _____

Curriculum Rep: _____

Department Chair: _____

Division Dean: _____

Approved By:

Curriculum Chair: _____

Executive Vice President: _____

Articulation Officer: _____

Librarian: _____

Implementation Term and Year: _____

Approval Dates:

Approved by Moorpark College Curriculum Committee: 09/14/2004

Approved by Board of Trustees (if applicable): _____

Approved by State (if applicable): _____