

# Network security

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CIS 56 (CRN: 33372) – Hybrid Course  
Winter, 2016

*Fisk, Thursdays 3:30-5:20 in ATC 205,  
Office hours: Thursday 3:00-3:30 & 5:30-6:00 PM in ATC 203b,  
5:00-6:00 PM Tuesdays via e-mail,  
and all other times via e-mail*

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## COURSE DESCRIPTION

Provides broad-based knowledge and hands-on experience with network security. Security topics include access control, cryptography, policies, physical, network, application, data defenses, auditing and security protocols. Also, course can help prepare students to pass the CompTIA Security+ Certification exam.

## PREREQUISITE SKILLS

Advisory: Computer Information Systems 108.

## INSTRUCTOR INFORMATION: LEN FISK

**Instructor:** Leonard (Len) Fisk

**Office Hours:** from 3:00-3:30 PM, 5:30-6:00 PM every Thursday, in ATC 203, 5:00-6:00 every Tuesday via e-mail (I'll be waiting at my keyboard), and almost all other times during the week via e-mail (my response is not guaranteed to be immediate). I will hold all office hours beginning on 1/7/2016.

**Office Location:** ATC 203.

**E-mail address:** <mailto:fisklen@fhda.edu>

**Website:** I will post up-to-date information regarding this course at Jones & Bartlett's site for this course. In particular, I will post updates and changes to this syllabus at that site which, like the campus "Catalyst" system, is Moodle-based. You will be accessing this site via <https://moodle.jblcourses.com/>. Various other links may be added at this class site, and assignments will be uploaded to it as well. It will be the center point for communications about the course. Effectively, the fee for a "Lab access" will your primary expense, although almost all of

you will purchase a textbook in one of two forms.also be included in the fee to buy access to this site.

## ATTENDANCE POLICY

Students are required to attend all class meetings every **Thursday, 3:30-5:20PM** in **AT 205**. See drop policy below.

## DROP POLICY

**Drop Policy:** By **midnight**, Wednesday of THE SECOND WEEK OF THE COURSE you must have purchased the text and the lab access, and have logged into the Jones and Bartlett site that provides the Moodle “main office” for the class and the critically important virtual laboratory. **By midnight on Friday of the second week (January 15) of class, you will also have completed and turned in (to J&B Moodle) the Week 1 Lab assignment posted on the website** (we will ignore the “challenge” assignments). (Note: This due date and time is 2 days later than I will expect for all remaining Lab assignments, which will be due at midnight on Wednesday.)

Failure to do these things may result in a DROP from the class.

Students who do choose to drop this class must follow the De Anza College drop procedures. The Drop calendar deadlines can be found at <https://www.deanza.edu/calendar>. Do not assume you will be automatically dropped from this course. If you intend to drop the course, you must drop yourself!

## OBJECTIVES

Upon completion of this course, you will be able to use a personal computer and understand the following personal computer objectives.

- A. Explore network security issues
- B. Investigate access control and identity management
- C. Utilize cryptography
- D. Investigate policies, procedures, and awareness
- E. Identify physical security
- F. Explore perimeter defenses
- G. Explore network defenses
- H. Explore host defenses
- I. Identify application defenses
- J. Identify data defenses
- K. Explore security assessments and audits

## STUDENT LEARNING OUTCOMES FOR THIS COURSE:

Determine methods to protect networks against security vulnerabilities.

## REQUIRED COURSE MATERIALS

**Textbook:** Fundamentals of Information Systems Security, Second Edition, with special virtual lab access, by David Kim and Michael Solomon.

**Purchasing text and lab materials:** You can purchase access to the virtual labs required for the course at the De Anza bookstore. ONLY the De Anza bookstore has the correct Lab Access code for sale. If you would prefer a hard-copy version of the textbook, the bookstore will have a number of copies for purchase. Please note that access to the virtual lab is unique for each person and cannot be shared: i.e., **the code you purchase will belong to you and to you alone.**

The bookstore will sell you a packet with either

**e-book:**

Fundamentals Of Information Systems Security 2E EVB/ VLA/ VLE 2.0, with Lab Access – ISBN# **9781284074444**, or

**hard copy text:**

Fundamentals Of Information Systems Security 2E Print/ IBC/ VLE 2.0, with Lab Access – ISBN# **9781284074451**, or

**Lab Access only:**

(No book) ISBN# **9781284074413**.

All of which will provide you with the access code you need for individual access to the Jones & Bartlett virtual lab site (& e-book or hard-copy book depending upon the option you have chosen).

**To redeem your access code for access to the JBL Virtual Security Cloud Lab**, do the following:

1. Go to [www.jblcourses.com](http://www.jblcourses.com) (NOT moodle.jblcourses.com)
2. Click on "**Redeem an Access Code**" on upper right side of screen
3. Enter the 8 digit lab access code you received and the four digit code for *this specific section* - **6190**. Then click **Submit**.
4. Once your access code has been validated, click on the blue **New User Sign Up** link underneath the yellow submit button. You must do the new user "sign-up" before you can enter a username and password.
5. In the **New User** Box type in
  - a. **Username** - must contain alphabetical letters, numbers, a hyphen, underscore, period, or @ sign. (**DON'T FORGET THIS AS IT MUST BE USED TO GET INTO THIS COURSE!**)
  - b. **Password** – must contain at least 8 characters, and include one digit, one lower case letter, one upper case letter, and one non-alphanumeric symbol such as "#". For instance, "XER#xes8". (**DON'T FORGET THIS AS IT MUST BE USED TO GET INTO THIS COURSE!**)
  - c. **First Name/Last Name** in appropriate box
  - d. **Email**
  - e. Click **submit**
  - f. You have successfully entered a link to your course on the next screen.
  - g. Click on the course name to enter the course.

If your code doesn't work or you are unable register please contact our tech support specific for the virtual labs and lecture presentations at 1-866-601-4525 or at [www.jblcourses.com/techsupport](http://www.jblcourses.com/techsupport).

**J&B Moodle and Virtual Lab Site:** As noted above, the J&B site will be used for completing all class assignments.

After you redeem your access code(s) to [1] gain full access the lab, and [2 - perhaps also] to download your text if you purchased an e-book, the fastest way to the J&B Moodle site for this course will be the URL <https://moodle.jblcourses.com>.

## GETTING STARTED IN YOUR COURSE

After your have purchased your course materials as described above, follow the getting started instructions at this link: <http://windows.deanza.edu/gettingstarted.pdf>

## REQUIRED COMPUTER COMPONENTS AND AVAILABILITY

**Hardware Requirements:** A PC computer is required to run the Jones and Bartlett software. If you do not own a PC, you may use lab computers in AT 203.

**Software:** The only software required for this class is actually run on the the Jones and Bartlett servers, which will require an up-to-date browser (preferably Mozilla Firefox) for you to access.

### Computers in CIS Lab:

If you need help with your course, you can use CIS lab computers. For CIS computer lab hours access <http://www.deanza.edu/buscs/lab/hours.html>

## SUBMITTING WEEKLY LAB ASSIGNMENTS

This course uses a Moodle website provided by the publisher, Jones and Bartlett (<http://moodle.jblcourses.com>). All course information except the text, which includes assignments, homework, course deadlines, etc. will be available to you on-line in your Jones and Bartlett course Moodle web site. When you enter the on-line course site at <http://moodle.jblcourses.com>, you will see a schedule of topics and Labs, arranged by week, that you will access as the course progresses. The due dates for exams and assignments are subject to change, and if changes occur, will be reflected in this document, which has a “date of last update” field in red at the upper right corner.

## LATE WORK

Work will be accepted after the due date according to the following rules: Ten percent (10%) of the maximum possible points will be subtracted for each working day (24 hours) the assignment is late. This will continue until one week (5 working days) has elapsed, when the points total will drop to zero, and no credit will be earned. If you have clear and compelling reasons for not getting an assignment in on time, please let me know on or before the day it is due, and I will arrange an extension for you.

## **QUIZZES**

Closed-book quizzes will be given at the outset of ten different classes. Students will have 20 minutes to complete each 20-question quiz. The final exam will be based, in part, on these same “surprise” quiz questions.

## **FINAL EXAM**

The 120-question, multiple choice closed-book, closed-notes Final Exam will be based on the homework questions.

## **LAB ASSIGNMENTS**

The required lab assignments can be found in Moodle and are counted toward your grade.

## **MOODLE PORTAL**

The Jones and Bartlett Moodle must be used as the portal for completing all assignments.

## **TESTING/GRADING POLICIES/FINAL GRADES**

To pass this course, you must complete ALL labs, homework, quizzes and Final Exam with the minimum scores shown below. Weekly deadlines for each assignment are posted inside the Jones and Bartlett Moodle web site.

### **Exams Grading Scale:**

- A 93% - 100%
- A- 90%-92%
- B+ 87%-89%
- B 83%-86%
- B- 80%-82%
- C+ 77%-79%
- C 70%-76%
- D+ 67%-69%
- D 63%-66%

## **WAYS TO EARN POINTS TOWARD A GRADE**

This course will require weekly, hands-on lab assignments in which you will be completing and submitting. You will take 7 “surprise” quizzes and a final exam. Finally, in addition to these graded activities, you have the opportunity to earn additional “extra credit” points by researching and presenting additional information about security tools, analyses of current security “exploits”

and security issues in the press and on the web to the class. The maximum possible points are summarized in the table shown below.

Source	number	points	total
Laboratory assignments	10	10	100
“Surprise” Quizzes	10	10	100
Final	1	100	100
Extra Credit/Security News	4	10	40
Attendance Points	10	3	30
Total points possible (/with Extra Credit):			330 (/370)

### Final Grade Mix:

The following percentages reflect how the final grade will be determined:

“Surprise” Quizzes	30.3%
Lab Assignments	30.3%
Final Exam	30.3%
Attendance	9.0%
Extra Credit possible	12.1% ( <i>this is in excess of 100%</i> )
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Total= 100% ( <i>112% with extra credit</i> )	

### ACADEMIC INTEGRITY:

Students who submit work of others as their own or cheat on exams or other assignments will receive a failing grade in the course and will be reported to college authorities.

### DISRUPTIVE CLASSROOM BEHAVIOR

Disruptive classroom behavior may include (but is not limited to) the following: talking when it does not relate to the discussion topic, sleeping, reading other material (e.g. newspapers, magazines, textbooks, from other classes), eating or drinking, monopolizing discussion time, refusing to participate in classroom activities, leaving cell phones and pagers on, riding unicycles on desks, texting, making rude biological noises, and engaging in any other untoward activity not related to the classroom activity. Students who engage in disruptive behavior will be approached by the instructor. If the disruptive behavior continues.

### NOTE TO STUDENTS WITH DISABILITIES

If you have a disability-related need for reasonable academic accommodations or services in this course, provide your instructor with a Test Accommodation Verification Form (also known as a TAV form) from Disability Support Services (DSS) or the Educational Diagnostic Center (EDC). Students are expected to give five days notice of the need for accommodations. Students with disabilities can obtain a TAV form from their DSS counselor (864-8753 DSS main number) or EDC advisor (864-8839 EDC main number).

## TECHNICAL DIFFICULTIES

If you have technical problems with the Jones and Bartlett software on your home computer, please contact Jones and Bartlett Technical Support directly at [www.jblcourses.com/techsupport](http://www.jblcourses.com/techsupport) or call 1-866-601-4525 OR complete your course work using our computers in the AT203 CIS lab.

## SCHEDULE/CALENDAR

Week	Date	Topic	News/Extra Credit Present?	Reading	Test / Quiz	Due
1	1/7/2016	Intro, syllabus, Introduction to Information Systems Security	No	Chpt 1		
2	1/14/2016	Changing how People & Businesses Communicate	Yes	Chpt 2	Quiz 01	Lab 1 - 1/15
3	1/21/2016	Malicious Attacks, Threats & Vulnerabilities	Yes	Chpt 3	Quiz 02	Lab 2 – 1/20
4	1/28/2016	Drivers of Info. Security Business & Access Control	Yes	Chpt 4&5	Quiz 03	Lab 3 – 1/27
5	2/4/2016	Security Operations and Administration	Yes	Chpt 6	Quiz 04	Lab 4 – 2/3
6	2/11/2016	Auditing, Testing and Monitoring	Yes	Chpt 7	Quiz 05	Lab 5 – 2/10
7	2/18/2016	Risk, Response & Recovery	Yes	Chpt 8	Quiz 06	Lab 6 – 2/17
8	2/25/2016	Cryptography	Yes	Chpt 9	Quiz 07	Lab 7 – 2/24
9	3/3/2016	Networks & Telecommunications	Yes	Chpt. 10	Quiz 08	Lab 8 – 3/2
10	3/10/2016	Malicious Code & Activity	Yes	Chpt. 11	Quiz 09	Lab 9 – 3/9
11	3/17/2016	Visiting Professionals talk about Security Jobs	Yes		Quiz 10	Lab 10 – 3/16
12	3/24/2016	<u>FINAL on Friday from 1:45 to 3:45 PM (120 min)</u>	No	Chapters 1-11		