



South Portland, Maine 04106  
Computer Information Security

---

**Title:** Fundamentals of Network Security

**Credit Hours:** 4

**Lecture (or Lab):** Lecture

**Office Hours – Location:** CSEC 24  
Tues & Thurs 12:00-1:00

**Catalog Number:** INSC 160

**Total Contact Hours:** 60

**Instructor:** Department Faculty

**Contact Information:** wplourde@smccme.edu

---

## Course Syllabus

### Course Description

Course provides an introduction to the fundamentals of network security, including compliance and operational security; threats and vulnerabilities; application, data, and host security; access control and identity management; and cryptography. The course covers new topics in network security as well, including psychological approaches to social engineering attacks, Web application attacks, penetration testing, data loss prevention, cloud computing security, and application programming development security. This course offers a comprehensive guide for anyone wishing to take the Computing Technology Industry Association (CompTIA Security+) Certification Exam.

**Prerequisite(s)** CMPT 100, CMIT 105, ENGL 100, MAT 125 or Higher

### Course Objectives

Student will be able to apply network security principles and strategies in Microsoft 2008 server, Windows 2007 and Web Browser environments. Students will be prepared to sit for the CompTia Security+ exam.

### After successfully completing the course, the student will be able to:

- Apply and implement secure network administration principles
- Describe the importance of security awareness and training
- Identify and analyze threats and vulnerabilities
- Describe the importance of application and data security
- Describe cryptography concepts
- Apply cryptography tools and products

## Course Outline

Topic/Chapter	Assignments	Points
Week 1 Introduction to Security	Module 1 Reading and Videos Labs Review Tools Module Quiz	40 20 15 25
Week 2 Malware and Social Engineering Attacks	Module 2 Reading and Videos Labs Review Tools Module Quiz	40 20 15 25
Week 3 Application and Networking-Based Attacks	Module 3 Reading and Videos Labs Review Tools Module Quiz	40 20 15 25
Week 4 Host, Application, and Data Security	Module 4 Reading and Videos Labs Review Tools Module Quiz	40 20 15 25
Week 5 Basic Cryptography	Module 5 Reading and Videos Labs Review Tools Module Quiz	40 20 15 25
Week 6 Advanced Cryptography	Module 6 Reading and Videos Labs Review Tools Module Quiz	40 20 15 25
Week 7	Module 7 Reading and Videos	40

Network Security Fundamentals	Labs	20
	Review Tools	15
	Module Quiz	25
Week 8	Module 8 Reading and Videos	40
Administering a Secure Network	Labs	20
	Review Tools	15
	Module Quiz	25
Week 9	Module 9 Reading and Videos	40
Wireless Network Security	Labs	20
	Review Tools	15
	Module Quiz	25
Week 10	Module 10 Reading and Videos	40
Mobile Device Security	Labs	20
	Review Tools	15
	Module Quiz	25
Week 11	Module 11 Reading and Videos	40
Access Control Fundamentals	Labs	20
	Review Tools	15
	Module Quiz	25
Week 12	Module 12 Reading and Videos	40
Authentication and Account Management	Labs	20
	Review Tools	15
	Module Quiz	25
Week 13	Module 13 Reading and Videos	40
Business Continuity	Labs	20
	Review Tools	15
	Module Quiz	25
Week 14	Module 14 Reading and Videos	40
Risk Mitigation	Labs	20

	Review Tools	15
	Module Quiz	25
Week 15	Module 15 Reading and Videos	40
Vulnerability Assessment	Labs	20
	Review Tools	15
	Module Quiz	25
Week 16	<b>Review Wrap It Up</b>	
Review		
Unit	<b>Total</b>	<b>1500</b>

### Course Requirements

This course will use BlackBoard with links to MandTap. Every week there will be the Chapter reading/videos, lab assignment, review of tools and chapter quiz. MindTap accounts for 80% of your overall grade.

### Student Evaluation and Grading

Participation/Discussions/	20%
MindTap – Work listed in table above	80%

A	93 - 100	C+	77 - 79
A-	90 - 92	C	73 - 76
B+	87 - 89	C-	70 - 72
B	83 - 86	D+	67 - 69
B-	80 - 82	D	63 - 66
		F	62.999

### Text, Tools and / or Supplies

Mark Ciampa, *Security+ Guide to Network Security Fundamentals, Fifth Edition*. Course Technology, Cengage Learning, ISBN-13: 978-1305093911, ISBN-10: 1305093917

Using MandTap from: <http://www.cengage.com/us/>

### **End-of-Course Evaluation**

Students complete evaluations for each course attended at SMCC. Evaluations are submitted online and can be accessed through the student portal. Students can access the course evaluations beginning one week before the end of classes. The deadline for submission of evaluations occurs Monday at 5 PM following the last day of the class. You will receive an email to your student email account when course evaluations are available.

### **ADA Syllabus Statement**

Southern Maine Community College is an equal opportunity/affirmative action institution and employer. For more information, please call 207-741-5798.

If you have a disabling condition and wish to request accommodations in order to have reasonable access to the programs and services offered by SMCC, you must register with the Disability Services Coordinator, Sandra Lynham, who can be reached at 741-5923.

Further information about services for students with disabilities and the accommodation process is available upon request at this number. Course policies about online testing are modified to suit each individual's accommodations.

### **SMCC Pay-for-Print Policy**

In an effort to control the escalating cost of supplies and to encourage students to conserve resources, SMCC charges for printing. Students receive a \$20 credit every semester. This credit resets for each semester and extra credit is not rolled over to the next semester. Per page costs are as follows:

- 8.5"x11" black and white: \$0.10 per page
- 8.5"x11" color: \$0.50 per page
- 8.5"x14" and 11"x17" black and white: \$0.20 per page
- 8.5"x14" and 11"x17" color: \$1.00 per page

Duplex (two-sided) pages are discounted 50% from the listed page costs.

Students can monitor their remaining credit and number of pages printed by visiting the IT Help tab on MySMCC or by checking the Printing Information icon in the lower right corner of the screen while logged in to an SMCC computer.

More information about the Pay-for-Print Policy is available on the IT Help tab on MySMCC.

### **Add-Drop Policy**

Students who drop a course during the one-week "add/drop" period in the fall and spring semesters and the first three days of summer sessions receive a 100% refund of the tuition and associated fees for that course. Please note any course that meets for less than the traditional semester length, i.e., 15 weeks, has a pro-rated add/drop period. There is no refund for non-attendance.

### **Withdrawal Policy**

A student may withdraw from a course only during the semester in which s/he is registered for that course. The withdrawal period is the second through twelfth week of the fall and spring semesters and the second through ninth week of twelve-week summer courses. This period is pro-rated for shorter-

length courses. To withdraw from a course, a student must complete and submit the appropriate course withdrawal form, available at the Enrollment Service Center (no phone calls, please). The designation "W" will appear on the transcript after a student has officially withdrawn. A course withdrawal is an uncompleted course and may adversely affect financial aid eligibility. Failure to attend or ceasing to attend class does not constitute withdrawal from the course. There is no refund associated with a withdrawal.

### **Plagiarism Statement**

Adherence to ethical academic standards is obligatory. Cheating is a serious offense, whether it consists of taking credit for work done by another person or doing work for which another person will receive credit. Taking and using the ideas or writings of another person without clearly and fully crediting the source is plagiarism and violates the academic code as well as the Student Code of Conduct. If it is suspected that a student in any course in which s/he is enrolled has knowingly committed such a violation, the faculty member should refer the matter to the College's Disciplinary Officer and appropriate action will be taken under the Student Code of Conduct. Sanctions may include suspension from the course and a failing grade in the course. Students have the right to appeal these actions to the Disciplinary Committee under the terms outlined in the Student Code of Conduct.