

CSCI 563 – Foundations of Information Security and Assurance (Spring 2013)

(Last updated: January 8, 2013)

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Office: JOUR 217

Office hours: Mon 3:30-5:30 PM, Wed 3:30-5:30 PM, Thur 9-12 AM and 1-4 PM

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Class Meeting:

Location: EDS 127

Time: Wed 12:30 PM – 3:10 PM

Course Description:

This course provides an introduction to the study of information security and assurance. Topics include confidentiality, integrity and availability; threats, vulnerabilities, attacks and countermeasures; access control; authentication; malicious logic; security policy, system models and mechanisms for security and information assurance.

Expected Student Learning Outcomes:

- State the basic concepts in information security, including security policies, security models, and various security mechanisms.
- Understand the issues of network communications such as service, confidentiality, authentication, reliability, access control, and availability.
- State threats and sources of attacks in network security.
- Explain how to use cryptography to protect information and how to choose an appropriate encryption method.
- State main strategies to secure Windows and Linux computers.
- Understand limitation of the current security technology and able to choose proper security mechanisms.

Prerequisites:

CSCI 152 Programming Fundamentals II, or instructor permission

Course Material:

- **[DG] Computer Security**, Dieter Gollmann, 3rd edition, Wiley, ISBN 0470741155, 2011.

Course Schedule (tentative):

Week	Content	Reading
1 (1/16)	Course introduction	[DG] Ch 1
2 (1/23)	Security management and definitions	[DG] Ch 2-3
3 (1/30)	Authentication, Access control	[DG] Ch 4-5
4 (2/6)	Reference monitors, UNIX security	[DG] Ch 6-7
5 (2/13)	Windows security	[DG] Ch 8
6 (2/20)	Database security	[DG] Ch 9
7 (2/27)	Software security	[DG] Ch 10
8 (3/6)	Midterm Exam	--
9 (3/13)	<i>Spring break (no class)</i>	--
10 (3/20)	Software security / Interim project presentation	--
11 (3/27)	Security models	[DG] Ch 11-12
12 (4/3)	Cryptography	[DG] Ch 14
13 (4/10)	Key establishment	[DG] Ch 15
14 (4/17)	Network security	[DG] Ch 17
15 (4/24)	Web security	[DG] Ch 18
16 (5/1)	Final project presentation	--
17 (5/8)	Final Exam	--

Grading Policy:

Items	Description	Weight
Homework	4 written homework assignments	20%
Project	Term project	25%
Midterm Exam	In-class	20%
Final Exam	In-class, cumulative	30%
Participation	Class participation	5%

Grading Scale:

A: 100-90, B: 89-80, C: 79-70, D: 69-60, F: Below 60

Late Policy:

The deadline for any assignment can be extended with a 15% penalty per day. No deadline can be extended by more than two days. Assignments will NOT be accepted 48 hours after the due date.

Collaboration Policy:

Students are encouraged to talk to each other, to the instructor, or to anyone else about any of the assignments. Any assistance, though, must be limited to discussion of the problem and sketching general approaches to a solution. Each student must write out his or her own solutions to the homework. Consulting another student's or group's solution is prohibited, and submitted solutions may not be copied from any source. These and any other form of collaboration on assignments constitute cheating. If you have any question about whether some activity would constitute cheating, please feel free to ask.

Academic integrity:

Your commitment as a student to learning is evidenced by your enrollment at Texas A & M University-Commerce. "All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment." (See Student's Guide Handbook, Policies and Procedure, Conduct). All phones, pagers, and other communication devices are to be turned off or place on silent mode during class. Instances of academic dishonesty will not be tolerated. Cheating on exams or plagiarism (presenting the work of another as your own, or the use of another person's ideas without giving proper credit) will result in a failing grade and sanctions by the University. For this class, all assignments are to be completed by the individual student unless otherwise specified.

Makeup Policy:

There will be no makeup exams in general. Makeup exams may be given to students under extreme circumstances, such as hospitalization, serious injury, death in the family, etc, with valid documents.

Students with Disabilities:

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services
Texas A&M University-Commerce
Gee Library, Room 132
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148
StudentDisabilityServices@tamu-commerce.edu

Basic Tenets of Common Decency:

“All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment.” (Student’s Guide Handbook, Policies and Procedures, Conduct.) This means that rude and/or disruptive behavior will not be tolerated.

Disclaimer:

This syllabus is meant to provide general guidance of what to expect from this course. The instructor reserves the right to make changes as appropriate based on the progress of the class. All changes made to this syllabus during the semester will be announced. This document has been posted electronically. If you print a copy of it, please be sure to consult the last modified date of the online version to verify that your printed copy is current.