

CSCI 351 FOUNDATIONS OF INFORMATION SECURITY (SPRING 2021)

(Last updated: December 14, 2020)

INSTRUCTOR

Instructor: Jino Kim, Ph.D.

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Office hours: TBD (will be announced through course Web page)

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CLASS MEETING

Section: 01W (ONLINE)

COURSE DESCRIPTION

This course provides the foundation for understanding the key issues associated with protecting information processing systems. Topics include essential security concepts, software security, network attacks and countermeasures, and practical cryptography. Prerequisites: CSCI 152 or consent of instructor.

EXPECTED STUDENT LEARNING OUTCOMES

- 1) Understand information security's importance in computing world
- 2) Learn the key concepts of information security and how they work
- 3) Develop skills to determine the concepts of authentication and access control
- 4) Understand the concept of software security regarding vulnerabilities and protections
- 5) Understand basic cryptography algorithms and mechanisms

COURSE MATERIAL

- **[GT] Introduction to Computer Security**, Michael T. Goodrich and Roberto Tamassia, 1st edition, Pearson, ISBN 10: 0321512944 (Required)

GRADING (TENTATIVE)

Components:

- **Assignments: 50%** (Weekly written/programming assignments)
- **Exams: 50%** (Three exams; the lowest score of the three exam scores will be discarded)

Letter grade:

A: 90 or above
B: 80 – 89.x
C: 70 – 79.x
D: 60 – 69.x
F: Below 60

CLASS ATTENDANCE POLICY

No face-to-face class meeting. For the online course, students are required checking announcements from the instructor through email and the course page frequently (on a daily basis).

For more information about the attendance policy please visit the Attendance webpage and Procedure 13.99.99.R0.01.

<http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx>

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf>

LATE POLICY (FOR ASSIGNMENTS)

The deadline for the **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. No deadline extension will be given for non-written assignments (e.g., programming, data analysis assignments).

MAKEUP POLICY (FOR EXAMS AND ASSIGNMENTS)

There will be NO makeup exams/assignments in general. Makeup chances may be given to students under extreme circumstances, such as hospitalization, serious injury, death in the family, etc, with prior consent and valid documents. No makeup will be allowed for any component other than exams and assignments.

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 and may result in a failing grade. If you have any question about whether some activity would constitute cheating, please feel free to ask.

ACADEMIC INTEGRITY

Students at Texas A&M University-Commerce are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

Undergraduate Academic Dishonesty 13.99.99.R0.03

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf>

Graduate Student Academic Dishonesty 13.99.99.R0.10

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/graduate/13.99.99.R0.10GraduateStudentAcademicDishonesty.pdf>

Anyone with cheating attempt will receive a zero on the work they are doing, and any subsequent cheating attempt may result in a failing grade.

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

Email: Rebecca.Tuerk@tamuc.edu

Website: Office of Student Disability Resources and Services

<http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/>

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. The Code of Student Conduct is described in detail in the Student Guidebook.

<http://www.tamuc.edu/admissions/registrar/documents/studentGuidebook.pdf>

The syllabus/schedule are subject to change.

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: Netiquette

<http://www.albion.com/netiquette/corerules.html>

SMOKE, VAPOR & TOBACCO FREE ENVIRONMENT

University Procedure 34.05.99.R1 now prohibits the use of vapor/electronic cigarettes, smokeless tobacco, snuff and chewing tobacco inside and adjacent to any building owned, leased, or operated by A&M – Commerce.

NONDISCRIMINATION NOTICE

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

CAMPUS CONCEALED CARRY

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations. For a list of locations, please refer to (<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>) and/or consult your event organizer). Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

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.

SCHEDULE (TENTATIVE)

WEEK OF	CONTENT	READING
Jan. 11 (W1)	Course introduction, Security goals	Syllabus, Ch1.1.1-1.1.2
Jan. 18 (W2)	Fundamental concepts and access control models	[GT] Ch1.1.3-1.2
Jan. 25 (W3)	Cryptographic concepts, usable security	[GT] Ch1.3-1.4
Feb. 1 (W4)	Physical security	[GT] Ch2
Feb. 8 (W5)	Exam 1	--
Feb. 15 (W6)	OS security (part 1)	[GT] Ch3.1-3.2
Feb. 22 (W7)	OS security (part 2)	[GT] Ch3.3-3.4
Mar. 1 (W8)	Malware (part 1)	[GT] Ch4.1-4.2
Mar. 8 (W9)	Malware (part 2)	[GT] Ch4.3-4.5
Mar. 15 (W10)	Exam 2	--
Mar. 22 (W11)	Network security (part 1)	[GT] Ch5.1-5.4
Mar. 29 (W12)	Network security (part 2)	[GT] Ch5.5, Ch6.1-6.2
Apr. 5 (W13)	Network security (part 3)	[GT] Ch6.3-6.5
Apr. 12 (W14)	Web security	[GT] Ch7.1-7.3
Apr. 19 (W15)	Course review and advanced topics	--
Apr. 26 (W15)	Exam 3	--