



## **CSCI 563 (01W) Information Security**

COURSE SYLLABUS: SPRING 2024

(Revision date: December 21, 2023)

### **INSTRUCTOR INFORMATION**

Instructor: Jinoh Kim, Ph.D.

Office Location: CS/JOUR 217

Office Hours: Appointment-based

- Mon Noon-3PM
- Wed 10:30AM-12:30PM
- Wed 2:00PM-3:00PM

University Email Address: [Jinoh.Kim@tamuc.edu](mailto:Jinoh.Kim@tamuc.edu)

### **COURSE INFORMATION**

Textbook(s):

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

Software Required:

- Python programming

Optional Texts and/or Materials:

- [PP] Security in Computing, Charles P. Pfleeger and Shari Lawrence Pfleeger and Jonathan Margulies, 5th edition, Prentice Hall, ISBN 10: 0134085043 (Reference)

### **Course Description**

This course provides an introduction to the study of information security and covers the most important features of computer security. Topics include basic concepts and principles in information security, authentication and access control, operating systems security, software vulnerabilities and threats, database security, and basic cryptography including encryption and key establishment.

*The syllabus/schedule are subject to change.*

**Student Learning Outcomes** (Should be measurable; observable; use action verbs)

1. Define the basic concepts in information security, including security goals and principles for confidentiality, integrity, and availability
2. Evaluate authentication and access control models and mechanisms
3. Enumerate security functions provided by operating systems such as Windows and UNIX
4. State vulnerabilities and threats to software including buffer overflows and source of attacks including viruses and worms
5. State database vulnerabilities and threats including SQL injections and statistical database
6. Explain how to use cryptography for encryption, authentication, and integrity for communication security

## **COURSE REQUIREMENTS**

### **Minimal Technical Skills Needed**

- Knowledge of programming (Python)
- Basic knowledge of computer and operating systems
- Basic knowledge of data structure, algorithms, and statistics/probability

### **Instructional Methods**

- Recorded lecture with presentation slides
- Homework assignments (written and/or programming)
- Exams

### **Student Responsibilities or Tips for Success in the Course**

- **Assignments:** On-time submission of assignments; Your answers should be typed and submitted in a single PDF file (unless otherwise instructed) – Any handwritten answers and non-PDF formatted submissions may not be graded resulting in a zero point.
- **Exams:** Well prepared for exams (with an ability to answer questions within the given exam time); Due to increasing cheating incident reporting, this course employs the following format for online testing: (1) You can see one question per page, (2) you cannot proceed to the next question unless you answer the current question, and (3) it is not allowed to go back to the previous question. This should be strictly applied to minimize any possibility of academic dishonesty/misconduct.
- **Communications:** This is an online-formatted course, and it is mandatorily required that the student reads announcements from the course page on a daily basis and email messages from the instructor without any significant delay (within 48 hours).

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## GRADING (Tentative)

Final grades in this course will be based on the following scale:

A = 90%-100%

B = 80%-89.999%

C = 70%-79.999%

D = 60%-69.999%

F = 59% or Below

Weights of the assessments in the calculation of the final letter grade:

Components	Weight	Remarks
Assignments	30%	One lowest score will be discarded
Midterm exam	35%	Two exams: the lower score will be discarded
Final exam	35%	Cumulative exam

### Attendance Policy:

This is an asynchronous, Web-based section and there will be no synchronous meetings (as it is not allowed by the university). For successful communications, the students are required for reading announcements with no significant delay (within 48 hours), disseminated through the course page and email messages.

### Assignment Policy:

The deadline for the assignment can be extended with a 15% penalty per day, up to two days (48 hours). Any submission later than 48 hours after the deadline will not be accepted and graded. No extension/resubmission request will be accepted (and even responded to); One lowest assignment score will be discarded.

### Exam Policy:

Makeup exams will not be given for any reason. However, students will have two midterm exams, and the higher score will only be considered for the final grade calculation. If a student is unable to take the final exam for any emergency reason, the student may receive an 'X' (incomplete), which is defined as follows:

"When an "X" is given for a grade in a course, the credit hours and grade point averages are not included until a grade is received which can be up to one year. If the "X" is not removed by that time, the grade becomes an F, and the hours are included in the number of hours attempted."

### Academic Misconduct:

The violation of academic integrity (including cheating and plagiarism) may cause a zero point on that work. Subsequent misconducts may result in a failing grade with the official filing of the case.

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## TECHNOLOGY REQUIREMENTS

### LMS

All course sections offered by Texas A&M University-Commerce have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are technical requirements

LMS Requirements:

<https://community.brightspace.com/s/article/Brightspace-Platform-Requirements>

LMS Browser Support:

[https://documentation.brightspace.com/EN/brightspace/requirements/all/browser\\_support.htm](https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm)

Zoom Video Conferencing Tool

[https://inside.tamuc.edu/campuslife/CampusServices/CITESupportCenter/Zoom\\_Account.aspx?source=universalmenu](https://inside.tamuc.edu/campuslife/CampusServices/CITESupportCenter/Zoom_Account.aspx?source=universalmenu)

## ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or [helpdesk@tamuc.edu](mailto:helpdesk@tamuc.edu).

**Note:** Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

## COMMUNICATION AND SUPPORT

If you have any questions or are having difficulties with the course material, please contact your Instructor.

### Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found here:

<https://community.brightspace.com/support/s/contactsupport>

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## **Interaction with Instructor Statement**

### **COURSE AND UNIVERSITY PROCEDURES/POLICIES**

#### **Course Specific Procedures/Policies**

##### **Syllabus Change Policy**

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

#### **University Specific Procedures**

##### **Student Conduct**

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/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx>

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

<https://www.britannica.com/topic/netiquette>

##### **TAMUC Attendance**

For more information about the attendance policy please visit the [Attendance](#) webpage and [Procedures 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>

##### **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](#)

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### [Undergraduate Student Academic Dishonesty Form](#)

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/documents/13.99.99.R0.03UndergraduateStudentAcademicDishonestyForm.pdf>

### [Graduate Student Academic Dishonesty Form](#)

<http://www.tamuc.edu/academics/graduateschool/faculty/GraduateStudentAcademicDishonestyFormold.pdf>

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

## **Students with Disabilities-- ADA Statement**

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

Velma K. Waters Library Rm 162

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

Email: [studentdisabilityservices@tamuc.edu](mailto:studentdisabilityservices@tamuc.edu)

Website: [Office of Student Disability Resources and Services](#)

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

## **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 Statement**

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

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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 the [Carrying Concealed Handguns On Campus](#) document and/or consult your event organizer.

Web url:

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>

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.

### **A&M-Commerce Supports Students' Mental Health**

The Counseling Center at A&M-Commerce, located in the Halladay Building, Room 203, offers counseling services, educational programming, and connection to community resources for students. Students have 24/7 access to the Counseling Center's crisis assessment services by calling 903-886-5145. For more information regarding Counseling Center events and confidential services, please visit [www.tamuc.edu/counsel](http://www.tamuc.edu/counsel)

### **AI use policy [Draft 2, May 25, 2023]**

**Texas A&M University-Commerce acknowledges that there are legitimate uses of Artificial Intelligence, ChatBots, or other software that has the capacity to generate text, or suggest replacements for text beyond individual words, as determined by the instructor of the course.**

**Any use of such software must be documented. Any undocumented use of such software constitutes an instance of academic dishonesty (plagiarism).**

**Individual instructors may disallow entirely the use of such software for individual assignments or for the entire course. Students should be aware of such requirements and follow their instructors' guidelines. If**

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no instructions are provided the student should assume that the use of such software is disallowed.

In any case, students are fully responsible for the content of any assignment they submit, regardless of whether they used an AI, in any way. This specifically includes cases in which the AI plagiarized another text or misrepresented sources.

**13.99.99.R0.03 Undergraduate Academic Dishonesty**

**13.99.99.R0.10 Graduate Student Academic Dishonesty**

### Department or Accrediting Agency Required Content

## COURSE OUTLINE / CALENDAR

Course schedule: The schedule may be subject to change.

WEEK NO.	CONTENT	READING
1	Course introduction, Security goals	Syllabus, Ch1.1.1-1.1.2
2	Fundamental concepts and access control models	[GT] Ch1.1.3-1.2
3	Cryptographic concepts, usable security	[GT] Ch1.3-1.4
4	Physical security	[GT] Ch2
5	<b>Exam 1</b>	--
6	OS security (part 1)	[GT] Ch3.1-3.2
7	OS security (part 2)	[GT] Ch3.3-3.4
8	Malware (part 1)	[GT] Ch4.1-4.2
9	Malware (part 2)	[GT] Ch4.3-4.5
10	<b>Exam 2</b>	--
11	Network security (part 1)	[GT] Ch5.1-5.4
12	Network security (part 2)	[GT] Ch5.5, Ch6.1-6.2
13	Network security (part 3)	[GT] Ch6.3-6.5
14	Web security	[GT] Ch7.1-7.3

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15	Advanced topics and course review	--
16	<b>Final Exam</b>	--

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