

MIS 7381: The Management of Information Security
Spring 2023: Tuesday 6-9PM
Synchronous Zoom Meetings

Professor: R. Cooper

Office:

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Office Hours

TBA

Course Focus

This course introduces management of information security. Throughout the semester, we will be focusing on issues such as:

- Identifying and prioritizing the importance of security for an organization's information assets, considering profit, legal, and ethical issues.
- Identifying and prioritizing potential threats to an organization's information assets.
- Identifying models and techniques for managing and controlling an organization's information asset security
- Determining an effective information security strategy and architecture
- Planning for and responding to information system security incidents, including disaster recovery

Required Textbook and Materials

- Kim, D. and Solomon, M.G. (2021) *Fundamentals of Information Systems Security*, Fourth Edition, Burlington, Mass: Jones & Bartlett Learning. ISBN-13: 978-1284220735

Course Grades

A 90-100 B 80-89 C 70-79 D 60-69

Course Evaluation

Assignments (30%) There are 3 assignments, each worth 10%. Assignments are due at the beginning of the assigned class. Feel free to email assignments to me if you cannot make it to class. Assignments that are turned in up to one week late will earn a maximum of ½ credit. Assignments more than one week late are not accepted.

Participation (15%) A significant amount of learning occurs during class presentations and discussions. Therefore, students will receive a participation grade for each class meeting. Unless otherwise cleared by me, your video camera must be on during class to receive a participation grade. Students who are absent will receive a zero for that class; students attending only a portion of a class period will receive a maximum participation grade equal to that portion. The two lowest grades will not be counted in determining the final participation grade.

Exam 1 (27%) Open book, Open Notes. Webcams must be turned on during the exam.

Exam 2 (28%) Open book, Open Notes. Webcams must be turned on during the exam.

Class Announcements/Assignments/Readings

Announcements, assignments, readings, etc. will be provided on the Blackboard Learn site for this class

Accommodations for Students with Disabilities

We would like to help students with disabilities achieve their highest potential in this class. To this end, in order to receive academic accommodations (e.g., for an exam), students must register with [the Justin Dart Jr. Student Accessibility Center](#) (telephone 713-743-5400), at the beginning of the semester.

Professional Conduct and Academic Honesty

All students are expected to conform to the Bauer Code of Ethics and Professional Conduct (see <http://www.bauer.uh.edu/BCBE/BauerCode.htm>). In addition, the University of Houston Academic Honesty Policy is strictly enforced. No violations of this policy will be tolerated in this course. A discussion of the policy is included in the University of Houston Student Handbook at the following website: <http://publications.uh.edu/index.php> Students are expected to be familiar with the Bauer Code and the University of Houston Academic Honesty Policy.

Counseling and Psychological Services (CAPS)

CAPS can help students who are having difficulties managing stress, adjusting to college, or feeling sad and hopeless. You can reach CAPS (www.uh.edu/caps) by calling 713-743-5454 during and after business hours for routine appointments or if you or someone you know is in crisis. Also, there is no appointment necessary for the "Let's Talk" program, which is a drop-in consultation service at convenient locations and hours around campus.

<https://www.uh.edu/caps/outreach/lets-talk/index> .

University Provided Information

COVID-19 Information

Students are encouraged to visit the University's [COVID-19](#) website for important information including diagnosis and symptom protocols, testing, vaccine information, and post-exposure guidance. Please check the website throughout the semester for updates. Consult the (select: [Undergraduate Excused Absence Policy](#) or [Graduate Excused Absence Policy](#)) for information regarding excused absences due to medical reasons.

Reasonable Academic Adjustments/Auxiliary Aids

The University of Houston complies with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, pertaining to the provision of reasonable academic adjustments/auxiliary aids for disabled students. In accordance with Section 504 and ADA guidelines, UH strives to provide reasonable academic adjustments/auxiliary aids to students who request and require them. If you believe that you have a disability requiring an academic adjustments/auxiliary aid, please contact [the Justin Dart Jr. Student Accessibility Center](#) (formerly the Justin Dart, Jr. Center for Students with DisABILITIES).

Excused Absence Policy

Regular class attendance, participation, and engagement in coursework are important contributors to student success. Absences may be excused as provided in the University of Houston [Undergraduate Excused Absence Policy](#) and [Graduate Excused Absence Policy](#) for reasons including: medical illness of student or close relative, death of a close family member, legal or government proceeding that a student is obligated to attend, recognized professional and educational activities where the student is presenting, and University-sponsored activity or athletic competition. Under these policies, students with excused absences will be provided with an opportunity to make up any quiz, exam or other work that contributes to the course grade or a satisfactory alternative. Please read the full policy for details regarding reasons for excused absences, the approval process, and extended absences. Additional policies address absences related to [military service](#), [religious holy days](#), [pregnancy and related conditions](#), and [disability](#).

Recording of Class

Students may not record all or part of class, livestream all or part of class, or make/distribute screen captures, without advanced written consent of the instructor. If you have or think you may have a disability such that you need to record class-related activities, please contact the [Justin Dart, Jr. Student Accessibility Center](#). If you have an accommodation to record class-related activities, those recordings may not be shared with any other student, whether in this course or not, or with any other person or on any other platform. Classes may be recorded by the instructor. Students may use instructor's recordings for their own studying and notetaking. Instructor's recordings are not authorized to be shared with *anyone* without the prior written approval of the instructor. Failure to comply with requirements regarding recordings will result in a disciplinary referral to the Dean of Students Office and may result in disciplinary action.

Resources for Online Learning

The University of Houston is committed to student success and provides information to optimize the online learning experience through our [Power-On](#) website. Please visit this website for a comprehensive set of resources, tools, and tips including: obtaining access to the internet, AccessUH, Blackboard, and Canvas; using your smartphone as a webcam; and downloading Microsoft Office 365 at no cost. For questions or assistance contact UHOnline@uh.edu.

UH Email

Please check and use your Cougarnet email for communications related to this course. To access this email, [login](#) to your Microsoft 365 account with your Cougarnet credentials.

Title IX/Sexual Misconduct

Per the UHS Sexual Misconduct Policy, your instructor is a "responsible employee" for reporting purposes under Title IX regulations and state law and must report incidents of sexual misconduct (sexual harassment, non-consensual sexual contact, sexual assault, sexual exploitation, sexual intimidation, intimate partner violence, or stalking) about which they become aware to the Title IX office. Please know there are places on campus where

you can make a report in confidence. You can find more information about resources on the Title IX website at <https://uh.edu/equal-opportunity/title-ix-sexual-misconduct/resources/>.

Security Escorts and Cougar Ride

UHPD continually works with the University community to make the campus a safe place to learn, work, and live. Our Security escort service is designed for the community members who have safety concerns and would like to have a Security Officer walk with them, for their safety, as they make their way across campus. Based on availability either a UHPD Security Officer or Police Officer will escort students, faculty, and staff to locations beginning and ending on campus. If you feel that you need a Security Officer to walk with you for your safety please call [713-743-3333](tel:713-743-3333). Arrangements may be made for special needs.

Parking and Transportation Services also offers a late-night, on-demand shuttle service called Cougar Ride that provides rides to and from all on-campus shuttle stops, as well as the MD Anderson Library, Cougar Village/Moody Towers and the UH Technology Bridge. Rides can be requested through the UH Go app. Days and hours of operation can be found at <https://uh.edu/af-university-services/parking/cougar-ride/>.

Syllabus Changes

Please note that the instructor may need to make modifications to the course syllabus. Notice of such changes will be announced as quickly as possible through (*specify how students will be notified of changes*).

Helpful Information

Coogs Care: <https://uh.edu/dsa/coogscare/>

Student Health Center: <https://www.uh.edu/healthcenter/>

Tentative Schedule

Week	Date	Class Topic	4 th edition	Assignments
1	January 17	Introduction	<ul style="list-style-type: none"> • Chapter 1 & Chapter 2 • Chapter 3: 72-76 	
2	24	Identifying Important Information Assets	<ul style="list-style-type: none"> • Chapter 1: 42 • Chapter 3: 90-93 • Chapter 8: 279-281 	
3	31	Laws and Ethics and the Importance of Information Assets	<ul style="list-style-type: none"> • Chapter 15 Laws • Chapter 9: 303-305 (ethics) • Chapter 4: 127-130 	Assignment 1 Due (See Blackboard)
4	February 7	Technical Threats & Vulnerabilities	<ul style="list-style-type: none"> • Chapter 3: 93-104 & 107-110 • Chapter 8: 255-275 • Chapter 5: 140-155 	
5	14	Technical Protection Mechanisms	<ul style="list-style-type: none"> • Chapter 8: 289-end • Chapter 5: 155-end (network) 	
6	21	Technical Protection Mechanisms: Cryptography	<ul style="list-style-type: none"> • Chapter 7 	
7	28	Employee-related threats and vulnerabilities and protection mechanisms	<ul style="list-style-type: none"> • Chapter 3: 104-108 (social engineering) • Chapter 8: 280-281 • Chapter 9: 305-308 	
8	March 7	Quantifying relative risk Review for Exam	<ul style="list-style-type: none"> • Microsoft Risk Prioritization Approach Summary Handout (See readings in Blackboard) • Chapter 3: 77-90 • HGA, focusing on Risk Prioritization (see readings in Blackboard) 	Assignment 2 Due (See Blackboard)
	14	<i>Spring Break!!</i>		
9	21	Exam 1		
10	March 28	Cost-Benefit Analysis	<ul style="list-style-type: none"> • Microsoft Cost-Benefit Analysis Assessment Summary Handout (See readings in Blackboard) • Chapter 3: 77-90 • HGA Case, focusing on Cost-Benefit Analysis (see readings in Blackboard) 	
11	April 4	Security Operations Auditing, Testing, Monitoring	<ul style="list-style-type: none"> • Chapter 9 • Chapter 10 	
12	April 11	Contingency Planning	<ul style="list-style-type: none"> • Chapter 4 • Chapter 11 	
13	18	Developing & Evaluating Security Policy	<ul style="list-style-type: none"> • Chapter 6 (Access Controls) 	
14	25	Critical Review		Assignment 3: (see Blackboard)
	May 9 (Tentative) 6:00-9:00PM	Exam 2		

Note the Date & Time

Understanding Information Assets, their Threats, and Protection

Weeks 1 & 2
(Chapters 1, 2, 3, 8)
Overview of information security & evaluating the importance of information assets

Week 4
(Chapters 3, 5, 8)
Understanding technical threats & vulnerabilities

Week 6
(Chapter 7)
Technical Protection Mechanisms: Cryptography

Week 8
(Microsoft Approach & Chapter 3)
Determining degrees of threats, vulnerabilities, and mitigation to assess relative risk

What are we trying to protect and why?

What can harm information assets and how can we protect them?

What can harm information assets and how can we protect them?

Quantifying information asset risk and determining what controls to implement

Week 3
(Chapters 4, 9, & 15)
Understanding how laws and ethics affect the importance of information assets

Week 5
(Chapters 5 & 8)
Technical Protection Mechanisms

Week 7
(Chapters 3, 8, 9)
Understanding the employee aspects of security: threats & vulnerabilities and associated protection mechanisms

Week 10
(Microsoft Approach & Chapter 3)
Quantifying, controlling, and managing risk

Planning & Organizing for Information Security in an Organization

Week 11
(Chapter 9)
Security Operations
(Chapter 10)
Auditing, Testing, and Monitoring

Week 12
(Chapter 4
Chapter 11)
Contingency Planning:
Incident Response,
BIA, BCP, and DRP

Week 13
(Chapter 6)
Evaluating a security management program using accepted models and practices