ISA 562 Information Security Theory and Practice

Summer 2023

Instructor: Dr. Wassim Itani
E-Mail: wassim@gmu.edu
Office Location: Buchanan Hall 217I

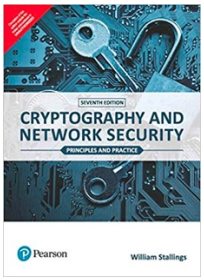
Office Hours: Tuesday 13:30 – 14:30 or by appointment
Prerequisites: INFS 501, 515, 519, and SWE 510, or permission of instructor.

Class Time & Location
IN PERSON Monday – Wednesday - Friday 13:20-16:20 ENGR 1103 Fairfax
Piazza
https://piazza.com/gmu/summer2023/isa562
Access code: itani562_Sum23
GTA
Somiya Singh Chhillar
schhilla@gmu.edu
Office hours: TBA

Important Note: You are expected to check your GMU Blackboard on a daily basis for any announcements made for this class including but not limited to, announcements for homework, assignments, exams, etc.

Course Information

Required Textbook:



Cryptography And Network Security, 7Th Edition, William Stallings, ISBN-13: 978-9332585225, Pearson, 2017.

You will also rely on material provided by the professor in the lecture notes

Computing Requirements

- Students are expected to have access to a Windows or Macintosh computer with at least 2 GB of RAM and to a fast, reliable broadband Internet connection (e.g., cable, DSL).
- Software requirements will be announced by the professor as needed.

Catalog Description
A technical introduction to the theory and practice of information security, which serves as the first security course for the MS-ISA degree, is required as a prerequisite for all subsequent ISA courses (at the 600 and 700 levels) and subsumes most topics covered by the CISSP examination. Also serves as an entry-level course available to non-ISA students, including MS-CS, MS-IS, and MS-SWE students. Offered by Computer Science. May not be repeated for credit.

Course Outcomes:
In this class, students will:

1. Describe the main security techniques and mechanisms for securing systems and networks
2. Explain the basic attacks on networks and the mitigation techniques against these attacks
3. Understand phishing attack and social engineering for attacking devices and networks
4. Explain access control mechanisms and intrusion detection and prevention
5. Understand the basics of data security and privacy
6. Understand denial of service attacks on systems and networks
7. Understand basic network security and web application security protocols

Course Grade:

Activity	**Weight**
Participation and Attendance (might include small quizzes).	10%
Homework Assignments/Mini Projects	30%
Midterm Exam	25%
Final Exam	35%

The letter grade will be assigned according to the following scale:

A+	>98
A	92-98
A-	90-92
B+	88-90
B	82-88
B-	80-82
C+	78-80
C	72-78
C-	70-72
D	60-70
F	<60

A set of 4 homework assignments will be provided over the semester.

Homework Assignments/Mini Projects
A set of 4 project components will be assigned during the semester. Some components should be developed individually while others can be developed in a team. The full assignment details will be posted on Blackboard. Late project submissions are NOT allowed. A submission is considered on time if submitted electronically on Blackboard on or before required submission date/time.

Exams
The course comprises a midterm and a final exam. There will be no makeup exams. Arrangements can be made in case of emergency, but the student needs to inform the professor

in advance unless the emergency is unexpected.

Class Attendance and Classroom Policy
Class attendance and active participation is required. The student is strongly encouraged to ask questions during the lectures or using online using Piazza, and this is viewed as part of the class participation. If the student is absent from class, he or she is responsible for any materials covered, handouts and any announcements made in class, regarding (but not limited to) class schedule, assignments, project and exams. Cell phones must be turned off during class.

Collaboration Policy
All assignments and projects must be completed individually, if they are not assigned to teams. On individual assignments, the students MAY NOT work together. The students may ask each other for general advice, but they may not share final answers. Word to word copy from another student or from the work of previous years is considered cheating and "We did the homework together" is not an excuse.

Disability Accommodations
If you are a student with a disability and you need academic accommodations, please notify me and contact the Office of Disability Services (ODS) at 993-2474, http://ods.gmu.edu. All academic accommodations must be arranged through the ODS.

Honor Code Statement
Please be familiar with the GMU Honor Code. In addition, the CS department has its own Honor Code policies. Any deviation from this is considered an Honor Code violation. All graded work must be your own effort. Any attempts at cheating will not be tolerated and will be turned in to the Honor Committee with significant penalty recommended. The usual recommendation is grade of F in the course.

Tentative Course Outline:
Check your Blackboard course page for the tentative course schedule

*Note: This syllabus is subject to change. Any changes will be announced. It is the student's responsibility to obtain the information on the changes applied.