



ISA 562: Information Security Theory and Practice Fall 2022

Instructor: Lisa Luo, Ph.D. Assistant Professor Computer Science 5328 Engineering Building Email: lluo4@gmu.edu	Course Website: <ul style="list-style-type: none">• https://lannan.github.io/ISA562-fa2022/isa562.html• https://mymasonportal.gmu.edu
	Class Time: F 10:30 am – 1:10 pm Location: Horizon Hall 1008
	Office Hour: F 9:30 am – 10:20 am or by appointments
Teaching Assistant: Yaswanth Reddy Manukonda Master student in CS, GMU Email: ymanukon@gmu.edu	Zoom meeting: Link is shared via emails and on Blackboard Office Hour: Thursday 2pm – 4pm or by appointments

Course Syllabus

Course Description

This course provides an introduction to information security. We will cover various topics, including a brief introduction to cryptography, network security, operating systems security, web security, and mobile security. We will also learn about security as a process.

Course Objectives

- We will understand the basics of cryptography, including block ciphers, message authentication, and digital signature.
- We will understand the most common attacks on computer systems, and the common methods for addressing these attacks.
- We will understand the continuous process of securing real world systems.

Recommended Prerequisites

INFS 501, 515, 519, and SWE 510

Required Textbook

There is no required textbook. All readings/materials will be available at the course website. All readings/materials comply with copyright/fair use policies.

Required Software

In order to access course materials and complete the course assignments you must have access to:

- A personal computer (PC) or laptop with the zoom software (for office hour).
- The Internet (for using email, browsing the web, accessing the course website, and submitting assignments).

Communication

The instructor will reply to all feedback in a reasonable amount of time; the same is expected of the students. Specifically,

- Communication: Responses to email communication and questions will be provided within 24 hours.
- Test Grading: Grades for tests will be returned within 1 week of due date.

Time Commitment and Planning

Any university course requires a large amount of work outside of lecture. I assume that when you register for this course you will allocate an average of 8-10 hours per week, in addition to lectures, to study the readings/materials, complete the project and prepare for exams. It is your responsibility to manage your workload. Note that **not being able to access a computer or network will not be considered an acceptable excuse for submitting your assignment late.**

Assessments

Your overall final course letter grade will be determined by your grades on the following assessments.

Homework	20%
Projects	20%
Midterm Exam	25%
Final Exam	30%
Class Attendance	5%

Your final grade is based on the total points you have earned over the semester. The percentage scores are translated to letter grades as follows:

A+ ($\geq 97.0\%$) A ($\geq 93.0\%$) A- ($\geq 90.0\%$)
 B+ ($\geq 87.0\%$) B ($\geq 83.0\%$) B- ($\geq 80.0\%$)
 C+ ($\geq 77.0\%$) C ($\geq 73.0\%$) C- ($\geq 70.0\%$)
 D ($\geq 60.0\%$) F ($< 60.0\%$)

Important Note Regarding Grade Appeals

If you have a question about a grade you have received, or you believe that you were graded incorrectly, please see me during **office hours**. If you wish to appeal an assignment grade you must do so within **one (1) week** of my posting the grade to Blackboard. If you want to make a case for re-grading your work based on another student's grade on the same assignment, I will review and then re-grade your work as well as the other student's work entirely from scratch.

Summary of Assessments

- **Homework:** There will be two homework assignments. The homework is individual work. Students are expected to work independently on the homework assignments, but are encouraged to seek help from the TA on homework related questions.
- **Projects:** There will be two group projects. Students will form a 4(or 5)-student group to conduct the projects. **Each group only needs to submit one project report for each project.** (1) The first page of the report should include each team member's name. (2) The project report should include the code, answers to assigned questions the contribution description of each team member, and a list of related work you have investigated (optional). Reports submitted on or before midnight of the due date may be considered for full credit. Late reports will be penalized 20% each day. Beyond three days, late reports will be recorded as zeros.
- **Exams:** There will be a midterm exam and a final exam in this course. Exams are open-book.

Late Submission Policy

Late submissions (including homework assignments and project reports) will be penalized 20% each day. Beyond three days, late submissions will be recorded as zeros.

Attendance Policy

You are expected to attend class lectures and participate in class discussions. If you expect to miss class for any reason, you are responsible for learning material covered in class.

Cheating

Feel free to discuss assignments with your classmates verbally. However, do not share your solutions with other students; do not copy solutions of others or online. Such behaviors will be reported to the University and lead to an F grade.

The team members within the same group should work collaboratively on the group projects. Each one should have his/her own contribution on the group projects, which should be explicitly specified in the project reports. If a student has no contribution, this student will get 0 point of the corresponding project.

Request for Accommodations

George Mason University is committed to providing access to programs and services for qualified students with disabilities. Any student who has a need for accommodation based on the impact of a documented disability should contact me privately to discuss the specific situation as soon as possible. Contact Disability Services at (703) 993-2474 to learn more about accommodations that may be available.

Academic Integrity

This course embodies the perspective that we all have differing perspectives and ideas and we each deserve the opportunity to share our thoughts. Therefore, we will conduct our discussions with respect for those differences. That means, we each have the freedom to express our ideas, but we should also do so keeping in mind that our colleagues deserve to hear differing thoughts in a respectful manner, i.e. we may disagree without being disagreeable.

<http://oai.gmu.edu/>