

CS 4803/8803: Sociotechnical Security

Course Information

Term: Fall 2026

Credit Hours: 3

Instructor: Veronica Rivera (varivera@gatech.edu)

Course Description

This course will focus on how human factors, such as human behavior, goals, and needs, both shape and are shaped by, the security and privacy of digital systems. For instance, how human behavior can lead to insecure systems and how digital systems can threaten users' safety. We will explore various topics in usable security and privacy and digital safety such as authentication, mental models of encryption, scams, online hate and harassment, and technology-facilitated interpersonal abuse. We will learn and apply human-centered and empirical research methods in the context of these topics, and discuss best practices of human-centered and empirical research in computer security.

Course Learning Outcomes

Upon successful completion of the course, you should be able to:

1. Speak knowledgeably about topics at the intersection of human behavior, security & privacy, and technology design.
2. Identify potential failures and of digital systems through a human-centered security lens.
3. Evaluate the impact of digital systems on individual and societal level security, privacy, and safety
4. Apply human-centered and empirical research methods to design for and evaluate security, privacy, and safety, in digital systems.

Required Materials

No textbooks are required. Instructor will provide any necessary reading material on course website.

Grading Policy

The grade cutoffs will be approximately: A > 90%; B > 80%; C > 70%; D > 60%.

The instructor reserves the right to adjust these upwards or downwards depending on how hard the assignments and course project end up being.

Graded Components

You will be graded on course participation, mini-project assignments spread throughout the term, and a larger term project. Your course participation grade will reflect your participation in class discussions and preparation for these (e.g., completion of short reading reflections to be submitted before the class period where these materials are relevant).

The grade breakdown is as follows:

- Attendance and participation: 25%
- Assignments: 25%
- Term project: 50%

Course Policies

Prerequisites

Undergraduate students must have taken CS 3237 (Human Dimension of Cybersecurity: People, Organizations, Societies).

There are no prerequisites for graduate students. Having taken a course in Human-Computer Interaction (HCI) is helpful, but not strictly required.

Attendance

Attendance in class is mandatory and students will be expected to show up prepared and reading to engage. Lectures will not be recorded. Lecture slides will be released following each class period, but active participation in class is required for success in the course.

However, **please do not attend the class in person if you are ill**. If you are ill and need to stay home, please email the instructor as soon as possible for alternative arrangements. The same policy applies if you need to be absent for emergencies or extenuating circumstances – please email the instructor **before the class you will miss** explaining your circumstance to discuss alternatives.

Academic Integrity

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards. Review Georgia Tech's [Honor Code](#) and the student [Code of Conduct](#).

Any student suspected of cheating or plagiarism on a quiz, exam, or assignment will be reported to the Office of Student Integrity, who will investigate the incident and identify the appropriate penalty for violations.

Student-Faculty Expectations

At Georgia Tech, we believe that it is important to strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body. The [Student-Faculty Expectations](#) articulates some basic expectations that you can have of me and that I have of you. In the end, simple respect for knowledge, hard work, and cordial interactions will help build the environment we seek. Therefore, I encourage you to remain committed to the ideals of Georgia Tech while in this class.

Communication with Professor

My pronouns are she/her. You can address me as Dr. Rivera or Professor Rivera.

If you would like to be called by a specific set of pronouns or a name that is different from your official school records, please let me know in any way that makes you comfortable.

You can contact me via email for anything related to the course. Please include CS 8803 and the topic of your message in the subject line. I receive many emails each day. **If you do not include CS 8803 in the subject, there is a high chance I will not read your email.** You can expect a response within 3 business days. Do not expect an immediate response to your email after business hours, during the weekend, university holidays, or while I am traveling. **Before emailing, make sure that your question has not already been addressed by the syllabus or announcements.**

Accommodations for Students with Disabilities

If you are a student with learning needs that require special accommodation, contact the [Office of Disability Services](#) (404-894-2563) as soon as possible to make an appointment to discuss your special needs and to obtain an accommodations letter. Please also e-mail me as soon as possible in order to set up a time to discuss your learning needs.

Collaboration

You can discuss and work on all assignments with others unless explicitly noted in the assignment instructions. If you choose to discuss and work with others, (1) any work you turn in must be written in your own hand, and (2) your submission must acknowledge your collaborators and how

you received help from them. For example “I worked with Alice and Bob on writing my interview protocol for this assignment”.

Generative AI

Generative AI can be both a useful and detrimental to your learning. In this course, you can use generative AI to edit your writing and in the same ways you would use a search engine (e.g., to find articles and resources). You **may not** use it to generate solutions to any of the assignments or to summarize articles that have been assigned to you as reading.

If you choose to use generative AI in your coursework, you must submit a short paragraph with the assignment in which you used it that describes

- What generative AI tools you used.
- How you used them, similar to how you would acknowledge help received from a human collaborator.
- What steps you took to verify the output of the generative AI system. For example, if you are using a generative AI tool to identify relevant research articles, how did you verify that the tool was not hallucinating the names of articles?

Extensions

You have three late days to be used throughout the term for the **assignments category only**. If personal circumstances arise which require a longer extension, contact the instructor.

After you have used up your three late days, 10% will be deducted from your grade for that assignment for each day it is late.

Late reading reflections will not be accepted. Reading reflections are meant to prepare you for in-class discussions. So if you do not turn them in on time, you will not be adequately prepared to contribute to that day’s activity and discussion. Not submitting a reading reflection on-time will be reflected in your overall participation grade.

I recognize that many of you are taking other demanding classes and have responsibilities outside the school that might cause you to fall behind. If you find yourself in this position, or struggling to keep up, please come talk to me. We can work together to find a suitable arrangement for you to learn and be successful in this class.

Acknowledgement

This course is based on similar courses taught at other institutions including by: Elissa Redmiles (Georgetown University) and Deepak Kumar (UCSD).