

Cybersecurity Threats and Countermeasures

COMP-5830/-6830

Spring 2025 Syllabus

Date: January 28, 2025

We 3:00 – 5:30pm CT

Location: Shelby 1120

Website: comp5830.org

Instructor: Dr. Springall
Phone 334-844-6660
Office Hours: Tu/Th 2–3pm CT
3101H Shelby
Email (b64): YWFzcHJpbmdAYXVidXJuLmVkdQ==

TA: Ginny Genge
Office Hours: Mo 2–3pm CT
2319 Shelby

Catalog Description

Analysis of methods used by ethical hackers to identify security threats against networks, systems, and personnel. Examination of tactics, techniques, and procedures employed by threat actors and defensive countermeasures.

Prerequisites

COMP-4320 Introduction to Computer Networks (or equivalent)

Course Materials

- **No textbook is required**
- Modern laptop using the x86-64 ISA
- Power Adapter for above laptop
- VirtualBox installation (free)
- (recommended) 100–200GB available storage

Lecture Details

Wednesdays 3–5:30pm CT, Shelby 1120

Ethics, Law, and University Policies

To effectively contribute to the security and privacy community as well as protect systems, networks, and information, it is vital to be able to think like an attacker and approach situations from their viewpoint. At times, this includes understanding and practicing techniques that can be used to compromise systems, networks, and information in the real-world and outside of controlled situations, this may violate the law, university policy, and commonly accepted ethical standards (among others). Under some circumstances, probing for weaknesses may result in severe penalties up to and including expulsion, civil fines, and jail time.

This course's policy is that you must respect the privacy and property rights of others at all times otherwise **you will fail this course**. Acting lawfully and ethically is each student's responsibility. It is highly recommended that students carefully read the Computer Fraud and Abuse Act (CFAA) [[link](#)] which is one of many federal statutes that broadly criminalizes security-related activities.

Grading

- **Quizzes** — 15%
- **PenTest Report Review** — 10%
- **Mid-Term Project** — 30%
- **Final Project** — 45%

Partial Credit Effort will be made to award partial credit but it is the students' responsibility to submit assignments in which partial credit is not necessary.

Attendance Attendance is not required nor taken but students are *highly encouraged* to attend all lectures and actively participate. Although slides will be posted after-class, recordings **will not** be made available to non-distance learning students unless an Absence Memorandum is provided by Engineering Student Services.

Late Assignments Any assignment submitted after the given deadline will receive a grade of zero (0). In the case of extenuating circumstances, the student *must* contact the instructor at the earliest reasonable opportunity. The Excused Absence policy will be applied but exceptions may be made at the instructor's discretion.

	A	90–100
	B	80–89
Grade Mappings	C	70–79
	D	60–69
	F	0–59

Course Policies (all formats)

Any and all university, college, and department policies are applicable.

Contacting the Instructor

In addition to the predictably available periods (office hours and post-lecture), students are welcome to call (334-844-6660), stop-by the office (3101H Shelby), or stop him in the hallway at any time. The instructor is usually on-campus between late-morning and late-night (i.e. “hacker hours”) and though not always available for long-form discussions, short questions can often be answered immediately and a near-term time can be setup to talk more (i.e. “come back in 20 minutes, an hour and half, etc.”). Although students can email the instructor if desired, this is the *least favored* communications channel and most emails will be either A) responded to during the next lecture period (if potentially of interest to other students) or B) redirected to the next-available office hours.

ADA

The instructor will make all reasonable accommodations to comply with the provisions of the Americans with Disabilities Act. Students can submit their university-approved accommodations through AU Access and to make an individual appointment with the instructor as soon as possible during the first week of classes. Students who have not established accommodations through the Office of Accessibility but need accommodations should make an appointment soon as possible with the Office of Accessibility, 1228 Haley Center, 844-2096.

Academic Honesty

All portions of the Auburn University Student Academic Honesty Code found in the Student Policy eHandbook apply to this class. All academic honesty violations or alleged violations of the SGA Code of Laws will be reported to the Office of the Provost, which will then refer the case to the Academic Honesty Committee.

You may discuss assignments with classmates. However, you are individually responsible for solving all assignments, including writing your own code. You are not allowed to view nor copy code or problem solutions from anyone. You **may not** use others' code (including open-source libraries/examples) unless it is *explicitly approved by the instructor in-writing*.

Excused Absences

For all excused absences, you must first obtain an [Absence Memorandum](#) from Engineering Student Services per the AU Policy on Class Attendance. You should contact the instructor directly for other absences and at the earliest possible opportunity.

Contingency Plan for Contingency Plans

In the event that any currently unrequired contingency plans become required, this contingency plan identifies that the contingency plan for that case is to define a contingency plan as required.

Online Office Hours

Due to the unpredictability of students' schedules, time-zones, and other commitments, there are no standing online office hours. Students are free to contact the instructor directly and at any time if a meeting is desired. The instructor is happy to meet via VTC or over the phone and will make every effort to schedule such a meeting as soon as possible. Based on past semesters, the instructor is often able to meet briefly (10–15 minutes) the same-day if not immediately (usually late-afternoon/evening CT-time).

Errata

- 27Jan2025: Clarify Office Hours