CS 3210 Syllabus

Design of Operating Systems; CS 3210; Sections A01, A02, A03, A04; 0 Credits

Fall 2026

Instructor Information

Instructor: Francisco Romero

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General Course Information

Description

Design, implementation, and evaluation of operating systems. Covers topics such as processes and threads, CPU scheduling, synchronization and concurrency, memory management and virtual memory, file systems, I/O, and virtualization.

Course Learning Outcomes

- Understand why and how operating systems are designed, organized, and function
- Work with OS kernel abstractions including virtual memory, scheduling, and I/O
- Implement core OS concepts through hands-on programming projects
- Think critically about OS design decisions and their trade-offs

Required Course Materials

xv6: a simple, Unix-like teaching operating system (free online)

Grading Policy:

A≥90; B≥80; C≥70; D≥60

Assignments

- Labs, 60%
- 2 Exams, 40%

Description of Graded Components

All assignments are mandatory. Supervised labs include a quiz due at the end of each session.

Course Policies

Attendance and/or Participation

Lecture attendance is not required. Supervised lab attendance is highly recommended. Students are responsible for all material and announcements made in class.

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.

Core IMPACTS

Not applicable

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.

Student-Faculty Expectations Agreement

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 articulate 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.

Pre- &/or Co-Requisites

- C programming
- Linux shell
- CS 2200 – Systems and Networks

Collaboration, Group Work, and Use of Generative AI

Some labs may have the option to be done in pairs; otherwise, they must be done individually. In-class tests and exams are to be your own work.

All forms of Generative AI (including CoPilot, ChatGPT, Gemini, and similar tools) are disallowed for completing any assignments. Anything submitted must be produced by you.

Extensions, Late Assignments, & Re-Scheduled/Missed Exams

Each student will have a pre-indicated number of late days for the total semester. Institutional excuses (medical, etc.) are handled case-by-case per university policy.