

CS 4210: Advanced Operating Systems

Spring 2001 Syllabus

Meeting Times:M-W-F, 1:05-1:55, CCB 101

Instructor: Yannis Smaragdakis, CCB 215, 404-385 1491
yannis@cc.gatech.edu
Office Hours: M, F 2:00-3:00 (tentative—make suggestions!) or by appointment

Teaching Assistant:
To be announced

Course Outline:

We will discuss operating system abstractions and their implementations. The core of the course contains concurrent programming (threads and synchronization), inter-address communication, and an introduction to distributed operating systems. Other topics may be added, especially in conjunction with related programming projects. Such topics include memory management (especially virtual memory subsystems), dynamic libraries, “avant-garde” kernel architectures (microkernels, exokernels), and file systems (e.g., log-structured file systems).

Textbooks: This is a seminar course—no textbook is strictly required, as I will be passing out copies of research papers. Here are some suggested background books:

Operating Systems Concepts, Silberschatz and Galvin, 5th Ed. Addison-Wesley.
(I assume you already have it from previous courses!)

Multithreaded Programming with Pthreads, Lewis and Berg. Prentice Hall.
(An excellent book, but I think it’s out of print.)

Pthreads Programming, Nichols, Buttlar, Farrell. O’Reilly.
(Fairly good and inexpensive Pthreads manual.)

Distributed Operating Systems, Tanenbaum. Prentice Hall.
(A good textbook for the subject.)

Exams: All exams are closed-books, closed-notes. Current schedule:
Midterm 1: Friday February 9
Midterm 2: Friday March 22
Final Exam: to be centrally scheduled (current tentative date: Wednesday May 2 2:50-5:40)

Grading: 60% exams: 15%, 15%, 30%
30% programming assignments
10% homeworks

Late Policy: 5% penalty for each day late, up to 5 days (25%), weekends together with Monday count as a single day.

Honor Code: The Institute Student Conduct Code is printed on pages 336-339 of the GT General Catalog. You and I are expected to abide by it. I do not deal with cases of academic misconduct in person (the Office of the Senior Associate Dean of Students will be notified).

Other Resources:

Newsgroup: `git.cc.class.cs4210` on the CoC news server (`news.cc.gatech.edu`).

Web page:

`http://www.cc.gatech.edu/classes/AY2001/cs4210_spring/`