

Syllabus Operating Systems (COP 4600) Fall 2008

General Information

Class meetings: MW 3:05-4:20 in CPR 127

Professor: Adriana (Anda) Iamnitchi (anda@cse.usf.edu)

Office: ENB 334

Phone: 813-974-5357

Office hours: MW 1-2:30pm and other times by appointment

Teaching Assistant: Paul Anderson (paanders@mail.usf.edu)

Office: ENB 220 (Linux Lab)

Tutorials/Office hours: TBD

Textbook: *Operating System Design and Implementation* (3rd edition) by Tanenbaum and Woodhull

Course website: <http://www.cse.usf.edu/~anda/cop4600/>

Course objectives (from the undergraduate catalog): “Introduction to systems programming. Design of operating systems. Concurrent processing, synchronization, and storage management policies.”

Class Outline

Week	Dates	Topics	Reading
1	08/25, 08/27	Introduction, System Calls, OS Structure	1
2	09/03	Processes	2.1
3	09/08, 09/10	Threads, Scheduling	2.1.7, 2.4
4	09/15, 09/17	Interprocess Communication (IPC)	2.2
5	09/22, 09/24	IPC, Classical IPC Problems	2.3
6	09/29, 10/01	Classical IPC Problems	
7	10/06, 10/08	Classical IPC Problems; Test I	
8	10/13, 10/15	Deadlocks	3.3
9	10/20, 10/22	I/O, Disks	3.1-3.2, 3.7
10	10/27, 10/29	Memory Management: Basics, Swapping	4.1, 4.2
11	11/03, 11/05	Virtual Memory, Page Replacement	4.3, 4.4
12	11/10, 11/12	Segmentation, Design Issues; Test II	4.5-4.6
13	11/17, 11/19	File Systems	5.1-5.2, 5.3
14	11/24, 11/26	Security	5.4
15	12/01, 12/03	Protection Mechanisms	5.5
Finals	Friday, 12/12 3-5pm	Test III	All tests are cumulative

Please note the three tests: 10/08, 11/12, and 12/12. Tests are closed notes, books, laptops, PDAs, phones, etc. All tests are cumulative.

There will be five programming assignments in C:

- 1) A program that uses system calls, due Sunday, 09/07, 11:59pm (5%)
- 2) A multi-threaded project that computes Fibonacci numbers, due Sunday, 09/14, 11:59pm (5%)
- 3) A multi-threaded project that makes use of synchronization and IPC primitives, due Sunday, 10/05, 11:59pm (5%)
- 4) A memory-management project, due Sunday, 11/09, 11:59pm (10%)
- 5) A UNIX shell program that implements redirection and pipes and has simple signal handling, due Sunday, 11/30, 11:59pm (15%)

Grading and Attendance

Final grade breakdown:

40% Programming assignments

60% Average of tests I, II, and III (each given equal weight)

There will be no make-up work.

Missed Exams: If you miss a midterm test with an acceptable, documented excuse (i.e., death in family or serious illness), your next test score will make up the missed score. You will receive a zero on any test missed without an acceptable, documented excuse.

Late assignments: For each day an assignment is late, the grade is reduced by 10%. A 5-day penalty-free flexibility time is granted as deadline extension for the entire semester.

Lab Tutorials: 7 hands-on tutorials will be held by the TA in the Linux Lab to assist students with programming projects. These tutorials will help you get started, become comfortable with the Linux environment and system calls, help you become more efficient in doing your programming assignments. Participation is very strongly recommended.

Attendance: As a way to record attendance and for you to evaluate your knowledge of the class material, there will be many unscheduled and ungraded 5-minute quizzes. These short tests will show you where you are compared to class expectations. While attendance is not directly reflected in the final grade, it will help me decide the borderline cases (e.g., for a score of 89.5). Absences put you at risk for missing assignments, schedule updates, and material not covered in the textbook. Students who will miss class for religious reasons must notify me of the date(s) in writing by 08/27.

Grading system: For final letter grades, I will use the standard scale of A (100-90), B (89-80), C (79-70), D (69-60), and F (59-0). I will also use pluses and minuses on final grades to indicate either a borderline grade or exceptionally outstanding work (A+). Please do not expect a curve. Grades will be posted on Blackboard (<http://my.usf.edu/>).

Academic integrity: Everything you turn in for this class must be your own work. If you are caught cheating, you will receive an FF grade for the class. Material copied from the Web and submitted as your work *is cheating*. Please see the University's Undergraduate Catalog regarding these policies at <http://www.ugs.usf.edu/catalogs/0708/adadap.htm>.

Finally, please do not sell notes from or record class lectures without my permission.

Every part of this syllabus is subject to adjustment as the semester progresses. Please contact me as soon as possible if you are dissatisfied with the course policies, lectures, assignments, grading, etc.; I will be happy to accommodate reasonable requests for modifications.