CMSC 412-101 (Spring 1996)

Professor:	TA:	TA:
Dr. Jeff Hollingsworth	Charles Lin	Alex Kaplunovich
4161 AV Williams	1109 A V Williams	1109 A V Williams
(40) 5-2708		
hollings@cs.umd.edu	clin@cs.umd.edu	kaplunov@cs.umd.edu
Office Hours:	Office Hours:	Office Hours:
Tu 10:45-12:00	F 1-3	M 12:30-2:30
W 11:00-12:00		W 12:30-2:30

Class URL: `http://www.cs.umd.edu/~hollings/cs412/s96/`
You are expected to check the class web page on a regular basis (at *least* weekly).

Catalog Description:
A hands-on introduction to operating systems, including topics in: multiprogramming, communication and synchronization, memory management, IO subsystems, and resource scheduling polices. The laboratory component consists of constructing a small kernel, including functions for device IO, multi-tasking, and memory management.

Objective:
An in-depth understanding of how an operating system manages resources in a computer and provides programmers with a machine and device independent interface. The emphasis of this class will be on operating system concepts. Running examples will be drawn from contemporary OS's including UNIX and Windows (NT and 95).

Prerequisites: CMSC 311, CMSC 330

Topics Covered (in approximately the order we will cover them):

- Introduction to Operating Systems (1 week)
- Concurrent Processes (2 weeks)
- Kernel implementation techniques (1 week)
- CPU scheduling (1 week)
- Memory Management (2 weeks)
- File and I/O Systems (2 weeks)
- Security and Protection (1 week)
- Networking and Distributed Systems (2 weeks)
- Objects and Naming (1 week)
- Window and Display Services (1 week)

Required Course Text:
Operating System Concepts **4th Edition**, Siberschatz and Galvin, Addison-Wesley 1994.

Programming Projects:
Understanding operating system concepts is a hands-on activity. This class will include several substantial programming projects that will require students to read and understand provided code, write new modules, and debug the resulting system. **The programming assignments will be time consuming and students taking this class should plan their class schedules accordingly.**

Grading:

Final Exam	30%
Midterms (2 each worth 15%)	30%
Programming Assignments	40%

Late Policy: TBA