CS 3204 Spring 2008

Midterm Preparation

Date: **Tuesday, March 25**
              9:30am to 10:45am
Location: **MCB 204 (classroom)**

Format:
The midterm exam will consist of 3-5 questions. It will be **closed book, closed notes, closed computer/without wireless access.** However, you are **allowed to bring one letter-sized sheet of paper with prepared notes** (you may use front and back of that sheet.)

You are responsible for the content of lectures 1 through 18 (up to including the March 20 lecture.) This includes, among others:

- Introduction to OS: general goals & principles of operating systems.
- Multiprogramming basics: protection, dual-mode operation, system calls and exceptions. Linking and loading.
- Threads & processes: context switching, mode switching, procedure switching, context management, threading & process APIs.
- Concurrency & Synchronization: critical section problem, race conditions, approaches for guaranteeing mutual exclusion, including locks, semaphores, monitors, spinlocks & disabling interrupts.
- Deadlock: conditions, detection & recovery.
- Scheduling: general goals & constraints, priority scheduling, FCFS, RR, SPN, MLFQS, Lottery Scheduling.
- Virtual memory basics: address translation, memory protection, page table & TLB management, demand loading

Our textbook covers this material in Chapters 1, 2, 3.1-3.5, 5, 6.1-6.8, 7, 8 and 9.

The midterm may also contain questions related to projects 0, 1, and 2.

There are sample midterms posted on the class website on the "Course Information" page in the section "Course material" which you may find useful.