Date: **Friday, Mar 24**
                10:00am to 11:05am (Note early start time)
Location: **PM 31 (usual 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 24 (up to including the Mar 20 lecture.) This includes, among others:

- Introduction to OS: general goals & principles of operating systems.

- 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. Real-time Scheduling: RMA & EDF.

- Virtual memory basics: address translation, memory protection, page table & TLB management.

Stallings covers this material in Sections 2.1-2.4, 3.1-3.4, 5.1-5.4, 5.6-5.7, 6.1-6.2, 6.4, 6.6-6.11, 7.1-7.3, 8.1, 9.1-9.4, and 10.2.

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