CS460 Operating Systems
Final Review

The final has been created starting with Chapter 8 and going back to Chapter 3. Minimally, I would review the following:

Chapter 8 – Main Memory

- Address Binding Times
- Logical vs Physical Address Space
- Logical addresses vs Physical addresses
- Base & Limit registers
- Contiguous Memory Allocation
- Fragmentation (internal vs external)
- Segmentation vs Paging
- Segmentation hardware vs Paging hardware
- Good problems to work: pp. 390-1 8.3, 8.4, 8.28a

Chapter 7 – Deadlocks

- Necessary conditions for deadlock
- Resource-allocation graph
- Methods for handling deadlock
- Deadlock prevention
- Safe state
- Good problems to work: 7.2, 7.10

Chapter 6 – CPU Scheduling

- CPU-I/O Burst Cycle
- Preemptive vs Nonpreemptive scheduling
- FCFS, SJF, Priority, RR, Multilevel Feedback Queue
- Gantt diagrams
- Good problems to work: 6.4, 6.17 a., b., c.

Chapter 5 – Process Synchronization

- Race condition
- Producer-Consumer
- Critical Section
- Synchronization
- Mutex Locks, Binary & Counting Semaphores

- Deadlocks & Starvation
- Bounded-Buffer
- Reader-Writers
- Dining Philosophers

Chaper 4 – Threads

- Benefits
- Thread Models
- Advantages & Disadvantages
- Processes vs Threads

Chapter 3 – Processes

- Process in memory contains …?
- Process State
- PCB
- Process Scheduling
- IPC