Midterm 2011 Scope

• This exam will have five questions.

• Question 1 (OS organization)
  – Know monolithic, layered and micro-kernel scheme.
  – Be able to differentiate between them
  – Know pros and cons of each

• Question 2 (Process States)
  – Know state diagrams of processes: ready, wait, blocked, etc.
  – Understand the roles of various queues and how processes move from one queue to another

• Question 3 (Concurrency and Race Conditions)
  – Know the semantics of cobegin/coend
  – Understand what race conditions are, how they arise, and implications of race condition.
  – Understand how executions of statements can be interleaved when run in parallel.

• Question 4 (Concurrency and Synchronization)
  – Know semaphores and how they can be used to implement synchronization among processes.
  – Understand monitors and how they can be used to implement synchronization among processes.
  – Know livelock, deadlock, and conditions under which they can occur.

• Question 5 (Scheduling): Know various scheduling algorithms, and how they can be applied.