

## Tentative Course Outline

Chapter	Topics	Labs
1	Intro to OS Computer-System Architecture Basic OS Security	Lab: Intro to Unix/Linux
2	System Calls API Mechanisms and Policies OS Structure	Lab: Strace  Review computer article
3	Process Schedulers	Lab: Creating a Shell
4	Threads Multithreading Models Thread Libraries	Review code for Program 4.15 and Project 2
	Test 1	
5	CPU Scheduler Pre-emptive scheduling Non-preemptive scheduling Thread Scheduling Multiple- Processor Scheduling Algorithm Evaluation	Lab: Concert Hall Problem
6	Process synchronization Critical Section Problem Semaphores Deadlock and Starvation Classic Problems of Synchronization Monitors Atomic Transactions	Producer-Consumer Problem Un-synchronized  Producer-Consumer Problem Synchronized
7	Deadlocks Necessary Conditions Deadlock Prevention Deadlock Avoidance Deadlock Detection Deadlock Recovery	
	Test 2	
8	Dynamic Loading Dynamic Linking Fragmentation Paging Segmentation	
9	Virtual Memory Demand paging Page Replacement Algorithms Frame Allocation Algorithms Thrashing	Program 9.40

