Syllabus

CS 111 Online MS Program

UCLA

Spring 2015

The textbook for this class will be Principles of Computer System Design, by Jerome H. Saltzer and M. Frans Kaashoek. The first 6 chapters of this book are in the printed volume, while the last 5 are only available online. Reading assignments from these later chapters will include a URL to access them.

Week 1 (March 30 – April 5)

Lecture 1: Introduction

Lecture 2: Operating System Basics

Week 2 (April 6 - 12)

Lecture 3: Hardware Issues for Operating Systems

Lab 1A due April 10

Lecture 4: Modularity and Virtualization

Week 3 (April 13 - 19)

Lecture 5: Processes

Weensy OS 1 due April 17

Lecture 6: Scheduling

Week 4 (April 20 – 26)

Lab 1B due April 23

Lecture 7: Process Communications and Concurrency

Lab 1C due April 26

Lecture 8: Critical Sections and Synchronization

Week 5 (April 27 – May 3)

Lecture 9: High Level Synchronization and Deadlock

No second lecture this week due to the midterm

Week 6 (May 4 – 10)

Lab 2 due May 10

Lecture 10: Memory Management and Virtual Memory

Lecture 11: Device I/O and Drivers

Week 7 (May 11 - 17)

Lecture 12: File Systems Design

Lab 3 due May 17

Lecture 13: File System Implementation

Week 8 (May 18 – 24)

Lecture 14: File System Naming and Robustness

Lecture 15: Networked and Distributed File Systems

Weensy OS 2 due May 22

Week 9 (May 25 – 31)

Lecture 16: Networking and Operating Systems

Lecture 17: Distributed Operating Systems

Week 10 (June 1 - 7)

Lab 4 due June 3

Lecture 18: Operating System Security: Basic Concepts and Cryptography

Lecture 19: Operating System Security: Problems, Solutions, and Privacy Issues

Design project due June 8