Syllabus

CS 111

UCLA

Winter 2014

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 (January 6 - 13)

Lecture 1: Introduction

Lecture 2: Operating System Basics

Week 2 (January 14 - 20)

Lecture 3: Hardware Issues for Operating Systems

Lab 1A due January 16

Lecture 4: Modularity and Virtualization

Week 3 (January 21 - 27)

Lecture 5: Processes

Minilab 1 due January 22

Lecture 6: Scheduling

Week 4 (January 28 – February 3)

Lab 1B due January 29

Lecture 7: Process Communications and Concurrency

Lecture 8: Critical Sections and Synchronization

Week 5 (February 4 - 10)

Lecture 9: High Level Synchronization and Deadlock

No second lecture this week due to the midterm

Week 6 (February 11 – 17)

Lab 1C due February 13

Lecture 10: Memory Management and Virtual Memory

Lecture 11: Device I/O and Drivers

Week 7 (February 18 - 24)

Lecture 12: File Systems Design

Lab 2 due February 20

Lab 1 design project due February 20

Lecture 13: File System Implementation

Week 8 (February 25 – March 3)

Lecture 14: File System Naming and Robustness

Lecture 15: Networked and Distributed File Systems

Minilab 2 due February 27

Lab 2 design project due February 27

Week 9 (March 4 – 10)

Lab 3 due March 6

Lecture 16: Networking and Operating Systems

Lecture 17: Distributed Operating Systems

Week 10 (March 11 - 17)

Lab 4 due March 13

Lab 3 design project due March 13

Lecture 18: Operating System Security: Basic Concepts and Cryptography

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

Lab 4 design project due March 17