

Syllabus

CS 111

UCLA

Fall 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.

Note on assignment due dates: These are tentative, and may be changed at the discretion of the TAs. If due dates of assignments are changed, the TAs will announce those new due dates before the dates listed on this syllabus.

Week 1 (September 24 – September 30)

Lecture 1: Introduction

Lecture 2: Operating System Basics

Week 2 (October 1 - 7)

Lecture 3: Hardware Issues for Operating Systems

Lab 1A due October 7

Lecture 4: Modularity and Virtualization

Week 3 (October 8 - 14)

Lecture 5: Processes

Minilab 1 due October 14

Lecture 6: Scheduling

Week 4 (October 15 – 21)

Lab 1B due October 21

Lecture 7: Process Communications and Concurrency

Lecture 8: Critical Sections and Synchronization

Week 5 (October 22 –28)

Lecture 9: High Level Synchronization and Deadlock

No second lecture this week due to the **midterm**, which will be on October 27

Week 6 (October 29 – November 4)

Lab 1C due November 4

Lecture 10: Memory Management and Virtual Memory

Lecture 11: Device I/O and Drivers

Week 7 (November 5 - 11)

Lecture 12: File Systems Design

Lab 2 due November 11

Lab 1 design project due November 11

Lecture 13: File System Implementation

Week 8 (November 12 – 18)

Lecture 14: File System Naming and Robustness

Lecture 15: Networked and Distributed File Systems

Minilab 2 due November 18

Lab 2 design project due November 18

Week 9 (November 19 – 25)

Lab 3 due November 25

Lecture 16: Networking and Operating Systems

Lecture 17: Distributed Operating Systems

Week 10 (November 26 – December 4)

NOTE: No class on November 26 due to the Thanksgiving holiday

Lab 4 due December 2

Labs 3 and 4 design projects due December 4

Lecture 18: Operating System Security: Basic Concepts and Cryptography

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

Final Exam: Friday, December 11, 3-6 PM