Syllabus

CS 111 Online MS Program

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 17
>
> Lecture 4: Modularity and Virtualization

Week 3 (January 21 - 27)

> Lecture 5:   Processes
>
> Weensy OS 1 due January 24
>
> Lecture 6:   Scheduling

Week 4 (January 28 – February 3)

> Lab 1B due January 29
>
> Lecture 7:   Process Communications and Concurrency
>
> Lab 1C due January 31
>
> 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 2 due February 14

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 3 due February 21

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

Weensy OS 2 due February 28

Week 9 (March 4 – 10)

Lecture 16:   Networking and Operating Systems

Lecture 17:   Distributed Operating Systems

Week 10 (March 11 - 17)

Lab 4 due March 14

Lecture 18:   Operating System Security: Basic Concepts and Cryptography

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

Design project due March 17