# Syllabus

# CS 111 Online MS Program

# UCLA

# Winter 2017

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. Due dates for projects are subject to change.

Week 1  (January 9 –15)

> Lecture 1:  Introduction

> Lecture 2:  Operating System Basics

Week 2 (January 16 - 22)

> Lecture 3:  Hardware Issues for Operating Systems

> Lab 1A due January 19

> Lecture 4:  Modularity and Virtualization

Week 3 (January 23 - 29)

> Lecture 5:      Processes

> Weensy OS 1 due January 26

> Lecture 6:      Scheduling

Week 4  (January 30 – February 5)

> Lab 1B due February 1

> Lecture 7:      Process Communications and Concurrency

> Lab 1C due February 3

> Lecture 8:      Critical Sections and Synchronization

Week 5 (February 6 – 12)

> Lecture 9:      High Level Synchronization and Deadlock

No second lecture this week due to the midterm

Week 6  (February 13 – 19)

Lab 2 due February 17

Lecture 10:    Memory Management and Virtual Memory

Lecture 11:    Device I/O and Drivers

Week 7  (February 20 - 26)

Lecture 12:    File Systems Design

Lab 3 due February 24

Lecture 13:    File System Implementation

Week 8 (February 27 – March 5)

Lecture 14:    File System Naming and Robustness

Lecture 15:    Networked and Distributed File Systems

Weensy OS 2 due March 3

Week 9 (March 6 – March 12)

Lecture 16:    Networking and Operating Systems

Lecture 17:    Distributed Operating Systems

Week 10 (March 13 - 19)

Lab 4 due March 17

Lecture 18:    Operating System Security: Basic Concepts and Cryptography

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

Design project due March 22