

EECS 211: Advanced System Software Lecture 1

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Lecture 1: Overview

- Course administration
 - EEE web page
 - Course communication
- Course overview
 - Description
 - Goals
 - Text book
 - Contents
 - Policies
- Operating Systems Overview
 - Essential concepts in operating systems (Review)

Course Administration

- EEE web pages at <http://eee.uci.edu/07w/18425/>
 - Instructor information
 - Syllabus
 - Assignments
 - Schedule
 - Resources
- Course communication
 - Note board
 - Email

Course Description

- EECS 211: Advanced System Software
 - Study of operating systems including
 - interprocess communication,
 - scheduling,
 - resource management,
 - concurrency,
 - reliability,
 - validation,
 - protection and security, and
 - distributed computing support.
 - System software design languages and modeling analysis.
 - Prerequisite:
 - EECS112 and EECS111; or consent of instructor.

Course Goals

- Objectives
 - To clearly understand the concepts that underlie operating systems.
 - To be able to use actual operating systems effectively.
 - To be able to analyze, design and develop essential parts of operating systems.
- Outcomes
 - Students understand advanced concepts used in operating systems.
 - Students are able to use advanced operating system concepts in programming.
 - Students are able to develop essential parts of operating systems.

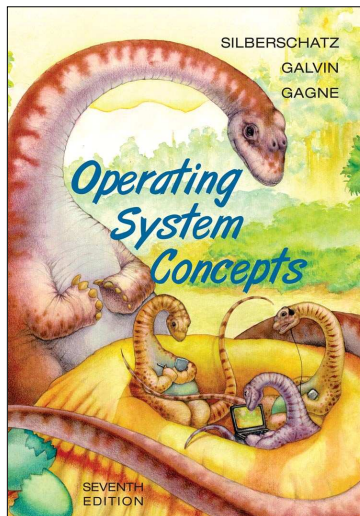
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Course Text Book

- A. Silberschatz,
P. B. Galvin,
G. Gagne:
*“Operating System
Concepts”*,
7th Edition,
John Wiley & Sons,
2005.
ISBN 0-471-69466-5



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Course Contents

0 Introduction, course set up, overview	Ch. 1-2
1 Processes, threads, scheduling, synchronization, deadlocks	Ch. 3-7
2 Memory management, virtual memory	Ch. 8-9
3 File systems, interface, implementation	Ch. 10-11
4 I/O systems	Ch. 13
5 Protection, security	Ch. 14-15
6 Distributed systems, file systems	Ch. 16-17
7 Distributed coordination	Ch. 18
8 Real-time, multimedia systems	Ch. 19-20
9 Case studies	Ch. 21-22
10 Course review, wrap up	n/a

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Course Policies

- Attendance and active participation required
- Weekly/biweekly programming assignments
 - Instructions on assignments web page
 - Hard deadline
- Grading
 - 10% Prerequisite Quiz (week 2)
 - 30% Homework assignments
 - 30% Midterm exam (week 6)
 - 30% Final exam (final week)
- Academic Honesty
 - Submit your original work!

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Operating Systems Overview

- Essential concepts in operating systems
 - Quick review of basic undergraduate material
- Excerpts from chapters 1 and 2 of *“Operating System Concepts”, 7th Edition*, by A. Silberschatz, P. B. Galvin, G. Gagne, John Wiley & Sons, 2005.