

# EECS 211: Advanced System Software Lecture 1

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## Lecture 1: Overview

- Course administration
  - EEE course web pages
  - 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/11w/18310/>
  - Instructor information
  - Syllabus
  - Assignments
  - Schedule
  - Resources
- Course communication
  - Message 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.
      - *C/C++ programming*

## Course Goals

- Objectives
  - To clearly understand the concepts in 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

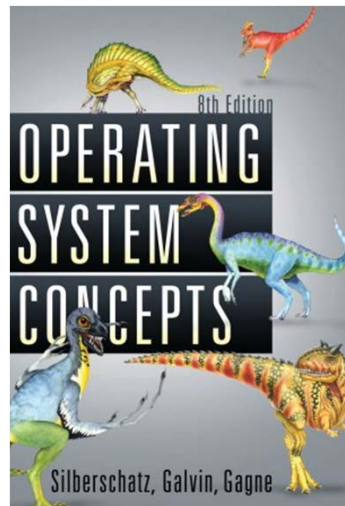
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## Course Text Book

- A. Silberschatz,  
P. B. Galvin,  
G. Gagne:  
*“Operating System Concepts”*,  
8th Edition,  
John Wiley & Sons, 2009.  
ISBN 978-0-470-12872-5



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## Course Contents (tentative)

1	Introduction, course set up, overview	Ch. 1-2
2	Processes, threads, scheduling, synchronization, deadlocks	Ch. 3-7
3	Memory management	Ch. 8
4	Virtual memory	Ch. 9
5	File systems, interface, implementation	Ch. 10-11
6	I/O systems	Ch. 13
7	Protection	Ch. 14
8	Security, cryptography	Ch. 15
9	Distributed systems	Ch. 16-17
10	Distributed coordination	Ch. 18

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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
  - 30% Homework assignments
  - 30% Midterm exam
  - 30% Final exam
- Academic Honesty
  - Submit your original work!

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## Operating Systems Overview

- Essential Concepts in Operating Systems
  - Brief review of basic undergraduate material
- Excerpts from chapter 1 of  
*“Operating System Concepts”, 8<sup>th</sup> Edition,*  
by A. Silberschatz, P. B. Galvin, G. Gagne,  
John Wiley & Sons, 2009.