Course Syllabus

Instructor: Yuanyuan Zhou (yyzhou@eng.ucsd.edu)
TA:*Tianyi Shan* (tshan@eng.ucsd.edu) **Eric Mugnier** (emugnier@ucsd.edu)

Lectures: **Tu/Th 2pm-3:20pm** (**Shortcut to Class Schedule**)
Location: **Pepper Canyon Hall 109**
Final Exam: **TBA**

Office and Lab Hours (Virtual)
Prof Zhou: Thursday 4pm-5:30pm via Zoom
Tianyi Shan (TA): Wednesday 10:30am - 11:30am @ CSE3152
Eric Mugnier (TA): Friday 10:30am - 11:30am @ CSE3152

Discussion: Piazza

Background: I have collected a list of good youtube videos for you to quick refresh or catch up any missing basic OS concepts. You can find it in: Youtube Video Collection

Homework

We will have a few written homeworks. The homeworks serve as good practice for thinking about papers and answering questions found on the final. Please turn in your homework and project report through Canvas.

Project

The course project will measure various aspects of system performance

Project Description

- Draft of Intro, Machine Description, and CPU Operations (Oct 19)
- Draft of Memory Operations (Nov 09)
- Final report with all measurements plus code (Dec 3)---extended to Dec 5th

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Course Objectives

The purpose of this course is to teach computer software system structures from a design point of view. We will look at different structuring techniques, and we will examine their usage in both important historical systems and in modern systems.

In addition to learning about different system structures and different operating systems, you will learn:

- How to read a research paper in an objective manner.
- How to write a critical analysis of the research described in a paper.
- How to articulate your understanding of and insights into a research paper.
- How to synthesize research themes and topics across multiple papers.

Course Structure

The structure of this class is unusual in that there are no lectures or presentations during the class period. Instead, we will discuss research papers that we will have all read before each class period. The instructor will lead discussions by asking questions of students at random in class.

To follow the discussion at lecture time, you will need to read the papers in advance. Otherwise you can be totally lost during the discussion.

Reading List

The course does not have a textbook. Instead, the course material will come from seminal, noteworthy, or representative papers from the literature. Each lecture (except the first) will have two assigned papers to read. You should read these papers before coming to class, and be prepared to discuss them (written evaluations are not required). Occasionally we will also list recommended papers; you are encouraged to read those, but not required. Students often find it useful to discuss papers together before the class period, and we encourage the practice (see more on collaboration below).

- Reading list and schedule

Grading

The grading breakdown for the course is:

- 4 Quizzes: 15% (we select your top 3 quiz scores. Quiz schedule can be found here)
- Homework: 20%
- Project: 30%
- Final: 35%

Late assignments will not be accepted without prior approval from the instructor.

Collaboration

Papers. I strongly encourage you to discuss the papers with other students in the class . you may have insights that others do not, and vice versa. Often groups of students form reading groups. Note that group discussion, however, is not an effective substitute for actually reading the paper.

Homework. You can also discuss the homework problems, but you must independently complete the assignments yourself. As a rule of thumb, you can discuss a homework problem in the lounge with others, walk home, wash the dishes, and then write up your answer to the problem on your own. You cannot, however, discuss homework problems with others and then write your answers to those problems at the same time.

Project. You can complete the course project as a team. You can discuss project materials with others in the course, but your code must have been authored exclusively by members of your team; you may not copy code from another team or make your code available to others.

In-class Quizzes and Final Exam. The quizzes and final exam should be individual effort only and closed book, and no cheat sheet is allowed.

You are expected to be aware of UCSD's academic honesty guidelines . Any violation of the course or university policies will be treated very seriously, and could lead to severe repercussions. Don't cheat. It's not worth it.