Lecture Notes

CS 417 – DISTRIBUTED SYSTEMS – FALL 2023

Week 1: Part 0
About the class
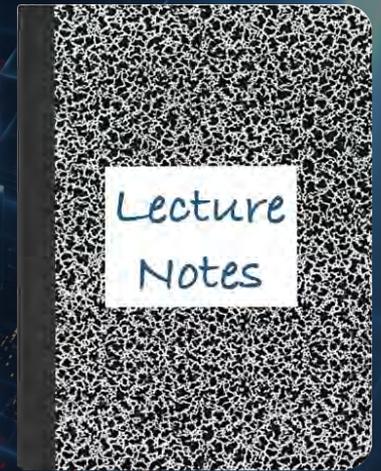
Paul Krzyzanowski

Web site, contact, & class info

Canvas: https://rutgers.instructure.com/courses/254670

web: https://people.cs.rutgers.edu/~pxk/

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Text

- No textbook for the course

- Course reading material
  - Lecture notes
  - Lecture slides
  - Published papers
  - Web documents

Policy

- **Due dates**
  - Individual assignments
  - Due *prior* to the due date/time

- **Collaboration & academic integrity**
  - Individual assignments – no copying!
  - All suspected violations will be reported to the Academic Integrity office

- **Attendance**
  - Short quizzes most weeks on material covered during the lecture

- **Excuses & Problems**
  - If any events keep you from doing your coursework, let me know *before* the end of the semester

See
https://pk.org/417/policy.html

Grades

Three exams
   Normalized grades:
     gpa $\cong \lceil 3.25 + (g - \bar{g})/\sigma \rceil$
+ 1 final exam
Lowest of four exam grades dropped
	~60%

Reading & short homework questions + ~3 programming assignments	**~20%**
Quizzes (attendance)	**~20%**

This is subject to change!!

What we'll cover

Generally, one topic per week

- Faults

- Communication, RPC

- Time

- Synchronization

- Groups & replication, consensus

- File systems: NAS, Parallel FS

- Distributed lookup

- Transactions

- Large-scale DB

- Content delivery

- Event streaming

- Parallel computation

- Security: authentication, & communication

- Clusters

What this course is *NOT*

- How to write web services

- How to use Azure, AWS, Google Cloud, etc.

- Big data analytics

- How to administer collections of computers

The End