CSCI 5817: Database Systems
Fall 2017

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Office Hours: MW 11:30a-12:30p
Available other times as needed, send me an email or stop by
Class Time/Location: MWF 3:00p-3:50p FLMG 154

Description:
This course covers some advanced topics in Database Systems. The course is primarily focused on advanced concepts associated with implementation and operations. While much of the discussion of these topics is framed with relational databases, a significant portion of the course covers design elements associated with contemporary database designs including key-value stores and graph databases.

DATABASE OPERATIONS
System Failures
Concurrency Control
Transaction Management

DISTRIBUTED DATABASE PROBLEMS
Distributed Databases and Query Processing
Distributed Locking and Commit
Consistent Hashing

NON-RELATIONAL DATABASES
OLAP vs. OLTP
Complex Data Types
Key-Value Stores
Graph Databases

Most of the operations material will be taken from the textbook. The remainder of the material will be based on academic papers.

Reading:


**Course Website:**
Please enroll ASAP in the Moodle course web page. Nearly all your class interactions will be available through Moodle. The enrollment key is **consistent**

The Moodle site includes two discussion forums. The first is used by the instructors to broadcast to the students. The other is a discussion forum to be used between students. The instructor watches this forum and will occasionally answer questions. The students are encouraged to jump in and answer questions before I get there!

**Grading and Policies:**

- Midterm 20%
- Final 30%
- Homeworks 30% (probably 4)
- Project 20% (big programming project)

[Plagiarism policy](#)

[Disability Policy](#)

[Religious Observances Policy](#)

[Discrimination and Sexual Harassment Policy](#)

[Classroom Behavior Policy](#)