CS166 - Database Management Systems
Winter 2020

Instructor Info

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Office Hours: MW 1 - 2 by appointment
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Course Overview

In this course, we will discuss various issues arising in the context of databases and the principles underlying the design of modern database systems. We will examine both theoretical and implementation issues.

Topics will include logical design, data models, normalization, query languages, file and index structures, concurrency, transaction processing, and as time permits, topics of recent interest such as data warehousing, spatial databases, and data mining.

There will be a class project, a mid-term and a final exam, and several homeworks.

Prerequisites: CS 100 and CS 111.

Textbooks

Database Management Systems by Raghu Ramakrishnan and Johannes Gehrke, 3rd edition, , McGraw Hill. We will be covering chapters 1, 2, 3, 4, 5, 8, 9, 10, 11, 12, 16, 17 from the book.

Schedule

Week 1	Logistics, Intro, ER-Model
Week 2	Relational Model
Week 3	Relational Algebra
Week 4	SQL
Week 5	SQL
Week 6	Storage
Week 7	Indexing
Week 8	Query Optimization/ Transaction Processing
Week 9	Parallel Databases
Week 10	Advanced Topics

Grade Breakdown

Your final grade will be calculated based on the following grade distribution:

- 25% - Labs (x10)

- 20% - Midterm (x1)

- 20% - Final Exam

- 25% - Final Project (3-part project)

- 10% - Mini Quizzes (usually on Fridays)

Late Policy

Labs will be accepted up-to 1 week late. All labs must be demoed to the TA to receive credit. If you miss a lab section due to an unexcused absence, you will lose 50% percent for that particular lab. If you are more than 15 minutes late to lab, you will lose 20 points.

Project/assignments turn-in will be accepted no more than 72 hours late and 10% will be deducted for each day late.

We will have a midterm and a final exam.

- Midterm - Feb. 7th (in class)

- Final Exam - March 19th 11:30 AM - 2:30 PM

Open Door Policy

If you are struggling with a specific topic, coding issue, team issue, then please don't hesitate to ask for help or advice. I have an open door policy, so please stop by my office for help or just to chat. If my office hours conflict with your schedule, please ask to make an appointment with me.

I'd be happy to talk about career or course advising, questions about research and other opportunities, concerns about performance in class, and suggestions for improving the class, good CS-related jokes, etc. You don't need a 'reason' to stop by my office, I would like to just get to know as many of you as possible over the 10-weeks.

Academic Integrity

As your instructor, I expect you to be completely honest. Industry experience proves that many projects, and even businesses, have failed due to the dishonesty and poor ethical behavior of individuals and/or groups of individuals.

As a result, I will not tolerate any hint of dishonesty among my students. The UC Riverside ethics policy will be strictly enforced. One of the ABET outcomes involves ethical behavior. This means that you should not do anything that raises any question of violating our ethics policy. This includes, but is not limited to, the following:

- Cheating: This includes looking at others tests, attempts to communicate with others during an exam, use of unauthorized reference materials, etc.

- Plagiarism: Copying of code or assignments, or failure to acknowledge the actual sources of information in a paper. Copying another student's code also constitutes plagiarism.

- Collusion: Sharing code or assignments with another student, even temporarily.

All cases of suspected academic dishonesty will be dealt with appropriately: because of the effect on the academic community, all cases of suspected academic dishonesty will be referred to the office of academic affairs. Please read the UC Riverside policies found on this link: `https://conduct.ucr.edu/policies/academic-integrity-policies-and-procedures`.

Accommodation

If you have a disability or believe you may have a disability, you can arrange for accommodations by contacting Services for Students with Disabilities (SSD) at 951-827-4538 (voice) or specserv@ucr.edu (email). Students needing academic accommodations must first register with SSD and provide required disability-related documentation. If you already have approved accommodation(s), you are advised to notify the faculty for each course.