

Database Systems

CSCI 4380 – Spring 2008

Syllabus

Instructor:	Minoo Aminian	
	Computer Science Department	
Office	Amos Eaton 208	
Office Hours:	Wed.: 10:00am – 12:00noon or by appointment	
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Office Hours:	T. 11:00am – 12:00n	Wed. 2:00 pm – 4:00pm
	Th. 4:00pm – 6:00pm	Fri. 10:00 am – 12:00 n.
Office:	Amos Eaton 109	Amos Eaton 217

1 Textbook

Database Management Systems, by Ragu Ramakrishnan & Johannes Gehrke is the required text of the course.

The following are good reference books on database management. They are not required for this course, just listed here as good supplements.

Database System Concepts, by Avi Silberschatz, Henry Korth, and S. Sudarshan. McGraw-Hill.

Database Systems by Jeffrey Ullman and Jennifer Widom, Prentice Hall.

2. Course Schedule

This is a tentative schedule and there might be some changes in the topics and dates as we progress.

Class Dates	Topics	Readings
Jan. 15	Overview of Database Systems	Ch. 1
Jan. 18	Introduction to Database Design	Ch. 2
Jan. 22	Relational Model	Ch. 3
Jan. 25	Relational Algebra/SQL	Ch. 4 and 5
Jan 29	SQL	Ch. 5
Feb. 1	Storing Data	Ch. 9

Class Dates	Topics	Readings
Feb. 5	Storage and Indexing	Ch. 9 and 8
Feb. 8	Tree-Structured Indexing	Ch. 10
Feb. 12	Hash-Based Indexing	Ch. 11
Feb. 15	Indexing and Sorting	Ch. 11 and 13
Feb. 19	No class	
Feb. 22	Query Evaluation	Ch. 12
Feb. 26	Query Evaluation	Ch. 12 and 14
Feb. 29	Evaluating Relational Operations	Ch. 14
Mar. 4	Midterm Exam	
Mar. 7	Query Optimization	Ch. 15
Mar. 10-14	Spring Break	
Mar. 18	Schema Refinement & Normalization	Ch. 19
Mar. 21	Normalization	Ch. 19
Mar. 25	Normalization	Ch. 19
Mar. 28	Transaction Management	Ch. 16
Apr. 1	Concurrency Control	Ch. 17
Apr. 4	Crash Recovery	Ch. 18
Apr. 8	Data Warehousing and Decision Support	Ch. 25
Apr. 11	Exam 2	
Apr. 15	Data Warehousing and Decision Support	Ch. 25
Apr. 18	Security	Ch. 21
Apr. 21	Data Mining	Ch. 26
Apr. 25	Data Mining	Ch. 26
Apr. 29	Final Exam	

3 Grading

The final grade breakdown is as follows:

Exam1	22%
Exam2	22%
Homework	10%
Project	10%
Final	36%

4 Late-work Policy

Up to four homework assignments and/or project-steps can be handed in late (by one class meeting) without penalty. No homework is accepted after the following class meeting unless with a prior arrangement to the due date or a documented illness.

5 Make-up Exam Policy

Exams are given during the class time, therefore there will be no makeup exam. Students who know they will miss an exam, must notify the instructor ahead of time. The only exception will be medical emergencies.

6 Academic Integrity

Academic dishonesty is considered a serious matter and the student may be subject to penalties as explained in the current Rensselaer Handbook of Student Rights and Responsibilities.

You may collaborate on homework assignments to discuss different solution techniques. In fact this is encouraged, however each student must write his own solution and copying is not acceptable.

Exams are to be strictly independent work. Any collaboration or information sharing during these will be considered academic dishonesty.