CS 375   Databases and Information Retrieval (Fall 2012)

Calendar Description (link): *History and motivation for database systems. Components of database systems and their functions. Data modeling to achieve good database design. Relational databases and database query languages. Transaction processing. Other topics include distributed databases, physical database design, and information retrieval systems.*

Prerequisites: CS 210.

Credit Hours: 3.

Instructor: Dr. JingTao Yao, Tel 585 4071, Office: CW308.18, Email: jtyao@cs.uregina.ca, Office hours: Tuesdays & Thursdays: 8:50-9:50am, 4:00-4:30pm.

Class time and location: Tuesdays & Thursdays: 10:00 am - 11:15 am, CL345

Final Exam: Friday December 13, 2012, 9:00 am - 12:00 pm

Textbook: *Database Management Systems*, Third Edition, 2002, by Raghu Ramakrishnan and Johannes Gehrke, McGraw-Hill, **ISBN:** 0-07-246563-8, **URL:** http://www.cs.wisc.edu/~dbbook

Other good textbooks: There are several other excellent database textbooks available, and you may also find them useful for reference.
1. *An Introduction to Database Systems*, by C. J. Date, Addison Wesley (1st 1975, 8th 2003)
2. *Database Systems: The Complete Book*, by Hector Garcia-Molina, Jeffrey D. Ullman, and Jennifer D. Widom, Prentice Hall. (1st 2001, 2nd 2008)
3. *Database Systems: A Practical Approach to Design, Implementation and Management*, by T. Connolly & C. Begg, Addison Wesley (1st 1995, 4th 2009)

Course website
> URL: http://www2.cs.uregina.ca/~jtyao/Teaching/CS375

Grading system:
1. Assignments   4 x 5% = 20%
2. Midterm test   30%
3. Exam   50%
4. Instructor's Discretion   +/- 5%

Tests and Exam: There are no make-up tests, quizzes and exam. If one cannot sit for the midterm test with approved reasons, the grade will be determined based on other evaluating items or attach to final. There is no reason for missing the final exam.

Assignments: Please submit your assignment to UR Courses (https://urcourses.uregina.ca/). If you are unable to complete an assignment due to health problems, for instance, a medical certificate is required before the assignment will be accepted. LATE assignments are NOT accepted. The URCourses time is the official cut-off time.

Attendance: You are expected to attend all scheduled lectures. If you cannot attend a lecture, it is your responsibility to catch up the contents. Little time is available to assist those who have missed relevant classes. Statistics show that students attend lectures regularly get high grades on exams. That is a fact that you should remember when making your daily decisions.

Course Outline (tentative):
1. Introduction to Database Concepts
2. Basics of Relational Databases
3. Conceptual Design and Entity Relationship Model
4. Relational Query Languages SQL
5. Relational Algebra
6. Relational Calculus
7. Functional Dependencies & Normalization
8. Information Retrieval
9. Data Mining

Important notes:
1. The dates, schedule, requirements etc. are tentative. The online version should be the latest one. Please check for changes.
2. Email communications with the instructor should be sent from URCourses. In addition, you may use your CS account. Class announcements will be sent to your CS/UofR account. There will be no reply to any free web-based email accounts, hotmail. gmail, or yahoo, for instance, and limited communications to some commercial ISPs (e.g. Access, Sasktel, etc.) or government email accounts.
3. Please read the sections of the 2012-2013 University of Regina General Calendar dealing with Academic Regulations, especially those regulations regarding academic integrity and plagiarism.