CS 582 — Database Management System II

Spring 2007

Organizational Matters

- **Time**: 1:10pm – 2:25pm, Thursdays and Tuesdays

- **Place**: SH113

- **Office Hour**: 2:30pm – 3:30 pm, Thursdays and Tuesdays

- **Final exam**: 1:00 pm – 3:00 pm, Tuesday, May 8

- **Instructor**: Dr. Son Cao Tran, SH 161, 646-1930

- **Web Site**: The course Web site is hosted by WebCT. Please visit the web-site to get the latest announcements.

- **TA**: Srikan Kalapala (Email: `skalapal@cs.nmsu.edu`)

Content

In this class, we will study several advanced topics in database which are not covered in the first class on database management system (CS482). Topics include:

- Query Optimization

- XML and Web Data

- Distributed Databases

- OLAP and Data Mining

- Object Databases

If time permits, we will study deductive databases, web services, and security and internet commerce. There will be some programming problems and 8-10 written homework (time allowed).

Prerequisites   It is assumed that the students are familiar with the basic topics covered in most of the first course in database. This includes: relational algebra, ER design, relational database design, SQL, Database application on the web, basics of query processing, Web design, PHP, etc. Familiarity with UNIX, C, Java, Oracle is necessary.

Books

- Databases Systems – An Application Oriented Approach (Second Edition). Michael Kifer, Arthur Bernstein, and Philip M. Levis: Addison Wesley, ISBN 0-321-26845-8

- Papers on advanced topics in database, whenever it deems appropriate

Tentative Schedule

The tentative weekly schedule is as follows:

- Week 1-2: introduction, review of relational algebra and SQL (Chapter 5)

- Week 3-5: Indices, Query Processing, Querry Opimization (Chapter 9, 10, 11, 12)

- Week 6-8: XML and Web Data (Chapter 15)

- Week 9: Review and Midterm

- Week 10: Spring break

- Week 11-12: Distributed Databases (Chapter 16)

- Week 12-13: Object Databases (Chapter 14)

- Week 14-16: OLAP and Data Mining (Chapter 17)

- Week 16: Review

- Week 17: Final Exam

Assignments

There will be around 8 to 10 assignments during the course. Announcement of assignments and submissions are managed through WebCT. Homework is important and weight 30% of your grade. A C grade is unavoidable if you miss all of this part.

Grade

Computed based on the standard scale of 100 points. The final letter grade will computed as follows:

Points	Grade
90% up	A
80%-89%	B
70%-79%	C
60%-69%	D
< 60%	F

with the following distribution: one midterm (30%), final comprehensive examination (30%), homework assignments (30%) and quizes(10%). Late homework will not be allowed. Quiz cannot be made up.

Class Policy

Students are required to attend class. Attendances will be taken at the beginning of the class. *Quiz will be given on a weekly basis.*

Withdrawing must be done on time, in accordance with the university calendar.

The grade of I (incomplete) may be given only if you are unable to complete the course due to documented circumstances beyond your control that develop after the last day to withdraw from the course. Appropriate circumstances include illness and death or crisis in your immediate family. Consult the university catalog for regulations regarding the I grade. In no case will an I grade be assigned to avoid a grade of D or F in the course.

If you elect to be graded under the S/U option, you must declare your intention when registering for the course. All work in the class will be graded in a manner identical to that for students choosing the letter grade option. At the

end of the semester, your final letter grade in the course will be used to assign either a S or an U. You must achieve a minimum grade of C in order to receive a grade of S.

It is expected that students follow the code of conduct stated in the University Student Handbook. Any violations of the code will result in a grade of F for the course, in addition to any further sanctions imposed by the university. Unless explicitly stated by the instructor, you are assumed to perform the assigned work by yourself, without any external collaboration. Note that a person copying an assignment is guilty of a violation of academic conduct, as is the person from whom the assignment was copied. Consult the web sites `http://www.nmsu.edu/%7Evpsa/SCOC/misconduct.html` and `http://www.lib.nmsu.edu/instruction/plagiarismforstudents.htm` for more on this topic.

Feel free to call Jerry Nevarez, Director of Institutional Equity, at 505-646-3635 with any questions you may have about NMSU's Non-Discrimination Policy and complaints of discrimination, including sexual harassment.

Feel free to call Michael Armendariz, Coordinator of Services for Students with Disabilities, at 505-646-6840 with any questions you may have on student issues related to the Americans with Disabilities Act (ADA) and/or Section 504 of the Rehabilitation Act of 1973. All medical information will be treated confidentially.