UNIVERSITY OF NORTH CAROLINA AT GREENSBORO
DEPARTMENT OF COMPUTER SCIENCE

CSC 671: Advanced Database Systems
Fall 2007

SYLLABUS

Instructor: Fereidoon (Fred) Sadri
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Office Hours: Thursdays after our class
Other times: Please call or send E-mail for appointment

by: Silberschatz, Korth, and Sudrashan
McGraw-Hill, 2006

Other Good Books:
Database Systems: The Complete Book
by: Garcia-Molina, Ullman, Widom
Prentice Hall

Database Management Systems
By: Ramakrishnan and Gehrke
McGraw-Hill

COURSE CONTENTS:

• Introduction.

• Relational databases.

• Query languages for relational databases: SQL, Relational Algebra.

• The Entity-Relationship model.

• Relational database design: Data dependencies, and decomposition theory.

• Extensible Markup Language (XML), Document Type Definition (DTD), XML Schema.

• Query languages for XML: XPath, XQuery.

• Selected Topics (Time Permitting): Information integration, modeling uncertain information, and the Semantic Web.

STUDENT LEARNING OUTCOMES: At the end of this course students will be able to

• Use a commercial database system effectively (create tables, add and modify data, and query the database).

• Design a database system for a given application.

• Our project provides hands-on experience with database design and implementation, including database access through a web interface.
GRADING SCHEME:
Homeworks, quizzes, presentations, and term papers: 20%
Project: 20%
Test 1: 20%
Test 2: 20%
Test 3: 20%

TEST DATES:
(If UNCG is closed on Thu. Dec. 6, 2007 due to inclement weather, make-up date for Test 3 is Fri. Dec. 7, 2007.)

NOTES:

• The grade you will receive in this course is a function of your numerical marks in the assignments, project, tests AND the overall performance of all students in the course. The marks will be “normalized” to assess a student’s performance. A rough guideline is as follows: 90% to 100%, A; 80% to 89%, B; 70% to 79% C; below 70%, F.

• Students should be present for all tests. No make-up tests will be given.

• I often use email to communicate with you. I will only use your UNCG email addresses. Please make sure to check your messages regularly. If you normally use a different email address, it is your responsibility to forward your UNCG messages to that address.

• You are encouraged to seek information in other books or on the web. BUT you must cite the source if you use any material from other books or the web (for example, in your homework). Otherwise it is considered cheating.

• You are all expected to attend other students presentations.

• Homeworks are due in class.

• A penalty of 20% (of the total homework mark) per day will be levied for late assignments. Late submission of a homework is accepted until it is discussed in class. You are encouraged to turn in homeworks even if you have lost all of its mark due to penalty.

• Computers do break down. In fact they often break down at the worst time. It is your responsibility to be prepared for such accidents, and still meet the deadline for your projects and hands-on assignments. Also note that the labs get very busy at the end of the semester.

• It is a good idea to retain a copy of your works until you receive your final grade for the course.

• Please back up all your computer work.

• Some topics from the text or references will be designated as “reading assignments”. You are responsible to read these topics on your own, and ask questions during my office hours if there are any parts that need clarification.

• Academic Integrity Policy will be strictly enforced.