CSCE 4350 – Database Design
Fall 2012

Instructor: Dr. Yan Huang
Office: F251
Office Hours: TTh 01:00-02:00pm
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Class Meeting Time and Place: TTh 02:00-03:20pm, Research Park B190
Class Website: http://www.cs.unt.edu/~huangyan/4350

TA: Jason Powell
TA Office Hours: TTh 12:00pm – 2:00pm
TA Office: F236

Text Book: Database Systems Concepts
by Abraham Silberschatz, Henry F. Korth, S. Sudarshan
Science/Engineering/Math

Supplement Books:

Course Objectives: To give the students a solid understanding of the design and implementation of database management systems. At the end of the course, students will know how to design a database from conceptual level, covert the conceptual design to relational databases, write SQL queries to retrieve relevant data from databases, and relational database theories that guide a good database design. Advanced topics such as transaction, access methods, query processing, data warehousing, XML as well as emerging technology data mining and big data management will be introduced.

Grading Scheme: Assignments: 30%
Project: 20%
Midterm: 20%
Final: 25%
Class participation: 5%

Each assignment will specify the material to be turned in. We will teach SQL but you will need to know one of the basic programming languages such as php, C++, and java in order to work on the interface between a program and a database.

Assignments are due before class on the due date. Assignments may be turned in up to 3 days late, with a penalty of 10% for each day late (week ends and holidays will be counted). No credit will be given after 3 days.

Academic Honesty:
Each program and homework assignment must be worked on individually. A submission carries with it an implicit statement that the submission is your own work. You may discuss the requirements and syntactical issues, but not solutions or designs. Violations may result in failure of the course.

Tentative Schedule:
Week 1 Introduction
Week 2 Relational Data Model
Week 3 SQL
Week 4 SQL
Week 5 Relational Algebra
Week 6 Midterm
Week 7 Relational Database Design
Week 8 Relational Database Design
Week 9 Access Method
Week 10 XML
Week 11 Transactions
Week 12 Concurrency Control and Recovery
Week 13 Big Data Management
Week 14 Data Warehousing and Mining
Week 15 Project presentations