INF 202 Introduction to Data and Databases  
(FALL2011)  
Instructor: Tianchi Zhang (Daniel)  
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Class Times: TTH 4:15PM – 5:35PM  
Meeting Place: SLG03  
Office Hours & Place: LI 84 , Office hours: Monday 2:30PM-4:30PM  
TA Office Hours: LI 84, Office hours: Thursday 9:00AM-11:00AM  

Catalog Description  
This course will examine basic principles of data and databases, with an emphasis on relational database modeling. Topics such as database design, creation, and maintenance, user interface, and SQL queries will be presented from an end-user perspective.  

A More Detailed Description  
This is a hands-on course on data and databases that also emphasizes an understanding of the theory underlying relational databases. The course deals with the analysis and design of databases as well as querying such databases to extract information needed by users.  

By the end of the semester, you should be able to  

· Analyze simple, typical real-world situations where databases are used and build models of relational databases  
· Design relational databases for simple real-world situations to avoid anomalies  
· Formulate simple queries in the structured query language (SQL)  
· Use the software Microsoft Access in the modeling as well as design of relational databases for simple domains
Textbooks

· Required:
  
  o Database Concepts (5th Edition), by David M. Kroenke and David J. Auer. Prentice Hall (2009), ISBN-10: 0-13-801880-4; ISBN-13: 978-013-801880-1. (KA in the Tentative Schedule below). *We will study the first five chapters in great detail and they will be covered extensively in the examinations. We may cover chapter 6 (on Database administration) and chapter 17 (on Database processing applications) at a superficial level and their coverage in the examinations may reflect that.*

· Recommended:
  

  This is available online free through the library at [library.albany.edu](http://library.albany.edu) (Datasbases & Indexes ® Safari Tech Books Online ® Databases & Reporting Tools ® cc: The Missing Manual).

  o Microsoft Office Access 2007: Comprehensive Concepts and Techniques

    Gary B. Shelly, Thomas J. Cashman, Philip J. Pratt, and Mary Z. Last, Course Technology (2009)


Grading:

30% Homework/Labs
10% Pop-Quizzes/Attendance
20% Midterm
20% Final Exam
20% Final Project

100% Total
Letter Grade
C+ : 75-78  C : 71-74  C-68-70  D : 60-67  E : 0-59

Grading in the course will be relative. I'll add your scores on the various components of
the course and arrange the class in descending order of the total score in the course. The
letter grades will reflect this ranking.

Attendance:
Attendance is essential for keeping up with the class. Students who miss classes or show
up late will lose credits.

The lowest two grades in homework, labs, or quizzes will be dropped to allow students
flexibility to deal with sickness, job interviews, and other personal issues preventing them
from attending some classes. Any other excuses for missing classes & assignments
require permission from the undergraduate dean's office.

Labs, Homework, Pop Quizzes, Midterm, Final Exam, and Final Project:

- **Labs:** The objective of the labs is to gain better understanding of the
  concepts explained in the class by using database/spreadsheet software. Many
  classes during the semester will be Labs where assignments will be given. They
  are due at the MIDNIGHT of the scheduled date.

- **Homework:** Occasionally, homework may be assigned, collected, and
  graded. The objective of the homework is to practice the concepts discussed in
  the class. Each homework will be specified when they are due.

- **Pop Quizzes:** Occasionally, there will be unannounced quizzes in the class.
  You are expected to have read and understood the concepts covered in the
  class.

- **Midterm and Final Exam:** These will be paper-based exams and will test
  the concepts and their applications as covered in the class. They will consist of
  problems, short cases, and some multiple choice problems. The parts of the
  course covered for each exam will be announced in the class at least two weeks
  prior to the exam date. Review classes will be held the classes before
  midterm and final exam.
· **Final Project:** The objective of this project is to provide you an opportunity to apply the concepts studied during the semester in a real-world application. Details of the project will be provided during the semester.

**Academic Dishonesty, Reasonable accommodation in case of disabilities:**
Any cases of plagiarism and academic dishonesty will be reported to the office of Judicial Affairs. Please read the University Undergraduate Bulletin for the policies. They will be followed rigidly. Please read and familiarize yourself with all the information on university policies at:

[http://www.albany.edu/undergraduate_bulletin/regulations.html](http://www.albany.edu/undergraduate_bulletin/regulations.html)

Please notify the Director of Disabled Student Services (Campus Center 137, Phone: 442-5490) where appropriate. Reasonable accommodation will be provided for those students.
Class Schedule

Week 1 and 2 (8/30 ~ 9/8)

- **Theme:** Introduction (Ch.1)
  

- **Concepts:** Data vs. Information, Metadata, Entities, Relationships, Data modeling

- **Access:** MS Access overview

Week 3, 4 and 5 (9/13 ~ 9/29)

- **Theme:** Modeling Data in Organizations (Ch.4)


- **Access:** Tables and Metadata
Week 6 & 7 (10/4~10/13)

- **Theme:** The Enhanced Entity-Relationship Model (*)
- **Topics:** Supertypes and subtypes, attribute inheritance, Generalization and specialization. Specifying constraints. Entity clustering.
- **Access:** Forms and Reports

*** MIDTERM EXAMINATION (Oct 18, Tue) ***

Midterm review class: Oct 13

Week 8, 9 (10/20 ~ 11/3)

- **Theme:** Database Design (Ch.5)
- **Access:** Creating Relationships

Week 10, 11, 12 (11/8 ~ 11/29)

- **Theme:** Structured Query Language (SQL) (Ch.3&3A)

• **Access:** Query and SQL

**Week 13 (12/1, 12/6)**

*** IN CLASS PROJECT PRESENTATION ***

**Week 14 (12/12)**

*** FINAL EXAMINATION (Dec 12) ***

10:30am – 12:30pm

Final project will due on the midnight of Dec 12