INLS 623
Database Systems II
Spring 2013
Monday/Wednessday, 9:30 – 10:45, Manning 304

Instructor:
> Arcot Rajasekar
> **Office:** Manning 216
> **Office Hours:** 11:00 – 12:00 pm Mon/Wed, & by appointment (email)
> **Email:** rajasekar at unc dot edu

Course Description: Intermediate-level design and implementation of database systems, building on topics studied in INLS 523. Additional topics include MySQL, indexing, XML, and non-text databases.

Prerequisite(s): INLS 382 or INLS 582, and INLS 523.

Textbook (required):
> *Fundamentals of Database Systems, Sixth Edition*
> Elmasri, R. and Navathe, S.B., Pearson Addison Wesley.
> (5th edition is also okay – but chapters are moved around)

Grading Scheme:
1. Class exercises & participation   5%
2. Homework   20%
3. Semester design project   30%
4. Midterm exam   20%
5. Final exam   25%

1. Course Description

Intermediate-level design and implementation of database systems, building on topics studied in INLS 523. Additional topics include MySQL, indexing, XML, and non-text databases.
.

2. Prerequisites

• knowledge of relational theory, including normalization and functional dependency
• knowledge of basic SQL (both DML and DDL)
• knowledge of Data Models, ER diagrams and conversion to relations
• knowledge of implementing simple databases and query processing.

3. Course Objectives

- Concepts in relational algebra and relational calculus
- Concepts in database storage, hashing and indexing
- Exercises in Advanced SQL and Embedded SQL
- Database Application Development – design and development project
- Non-relational databases (XML, non-textual, web, object, NoSQL, etc)

4. Hardware and Software Requirements

You will require a laptop to install and run MySQL. This will be used for all SQL-based exercises. The main project will be done on an Oracle database running at SILS..

5. Graded Work

Your grade will be based on a class exercises and participation, a midterm test, a final exam, homework assignments, and a semester long database design project, weighted as shown under "Grade Weighting" on the first page.

Semester Design Project
The project carries 30% weight. You will be design and implement a database and demonstrate its usage by the end of the semester. The project will be in three parts: information gathering (10%), design (10%) and implementation (10%). Details about the project will be discussed throughout the semester.

Homework
Homework assignments will be assigned throughout the semester.
.
Exams
There will be one mid-term and one final exam.

6. Grading Policies

The following grade scale will be used AS A GUIDELINE (subject to any curve):

Graduate Percentage	Undergraduate Percentage
H 100-95%	A 100-90%
P+ 94-90%	B 89-80%
P 85-89%	C 79-70%
P- 80-84%	D 69-60%
L 70-79%	F Below 60%
F Below 70%	

This scale will be used as a GUIDELINE ONLY. The final grade scale may differ.

Due Dates and Late Work
Each assignment will have a due date and time and will include instructions for submission. Late submissions will not be given any credit if submitted after graded assignments or solutions have been released. Typically, a late penalty of 10% per day will be applied unless prior arrangements have been made with the instructor.

Requests for Extensions and Absences
Any request for an extension must be made, preferably by email, at least 24 hours prior to the due date. Written documentation is required for illness. If a serious illness prevents you from taking any of the tests, send your instructor an e-mail message, or a friend with a note, describing your condition before the scheduled test. Also, to establish a valid excuse for an illness you must get a note from a physician or the University infirmary. Before missing a test for any reason, you must make every effort to discuss the problem with your instructor before the day of the test.

Statute of Limitations
Any questions or complaints regarding the grading of an assignment or test must be raised within one week after the score or graded assignment is made available (not when you pick it up).

7. Course Communication (Sakai)

A course website will be set up and it is the responsibility of every student to **check the Sakai website regularly** for announcements. The Announcements section of the website will be the source for all **official announcements** related to the class. Your instructor may announce tests, assignments, or changes to assignments in class, but there is no guarantee or promise that such announcements will be made in class. The Announcements section of the website is the **only** official, reliable source for announcements, changes, etc. from the instructor. If something the instructor says in class conflicts with information posted by the instructor on the website, then the information posted on by the instructor **on the website takes precedence**. Verbal instructions are easily mis-interpreted, and they do not leave a documentation trail. Access to the system will be announced in class.

8. Honor Code

The UNC Honor Code is in effect for all work in this course. When work or ideas are not your own, you must attribute them. Unless otherwise stated, all assignments in this class are individual assignments, meaning that the substance of the work you turn in must be your own. If you have any doubts or questions about a course of action or a specific situation, please ask for clarification. Students should NOT receive (or give) major creative assistance or ongoing minor support on individual assignments. If you have any questions about this, please ask me.

9. Special Accommodations

If any student needs special accommodations, please contact the instructor during the first week of classes.