#### SYLLABUS

Instructor: Yann Chang (jsun@uic.edu)

Office/Ph/email: UH2424; (312) 355-1245; jsun@uic.edu Class Time: 11:00am - 12:15pm Tuesday and Thursday

Classroom: Taft Hall room 100

Office Hours: 2:15pm - 4:15pm Monday and Wednesday

## Course Objectives:

- a. To understand the role of databases in organizations and the role of database development within the systems development life cycle.
- b. To introduce a conceptual data modeling with the entity-relationship model and enhanced entity-relationship model.
- c. To understand the process of converting a conceptual data model to the relational data model in the logical database design phase; and to learn the steps necessary to achieve an efficient database design in the physical database design phase.
- d. To introduce Structured Query Language (SQL).
- e. To introduce the concepts of web-database connectivity.

# Assignments:

There will be four or five individual assignments and one term project. For the term project, students will form groups of up to three students. With a majority vote, a free rider can be dismissed from a group within two weeks after the assigned date. The dismissed student can do the project alone or join another group, if this is acceptable to the other group. In the project report, each group member should specify the contribution he or she made to this project.

# Grading: Letter Grades Determination:

| 4 or 5 Assignments | 30% | A – 90% or above            |
|--------------------|-----|-----------------------------|
| Term project       | 25% | B - 80% and below 90%       |
| One midterm        | 20% | C - 70% and below 80%       |
| Final              | 25% | D - $60\%$ and below $70\%$ |
|                    |     | F - below 60%               |

#### Total Score Calculation

Total score = 0.3\*(Average of assignments) + 0.25\*Project + 0.20\*Midterm + 0.25\*Final

Depending on class performance, the grades might be curved.

### Acquired Knowledge:

Upon completion of this course, the students are expected to have an understanding of database analysis using entity-relationship modeling and enhanced entity-relationship modeling. In addition, the students are expected to understand how to map the conceptual data model into a relational data model during the logical database design; and then implement this relational model into a specific database management system during the physical database design. Moreover, the students are also expected to understand the concepts of web-database connectivity, which is a foundation for electronic-commerce applications.

Required Text: any one of these three books would be fine:

"Modern Database Management  $(10^{\rm th}~{\rm edition})$ ," Jeffrey A. Hoffer, Ramesh Venkataraman, and Heikki Topi, Prentice Hall, 2010.

ISBN-13: 978-0-13-608839-4

ISBN-10: 0-13-608839-2

"Modern Database Management ( $9^{th}$  edition)," Jeffrey A. Hoffer, Mary B. Prescott, and Heikki Topi, Prentice Hall, 2008.

ISBN-13: 978-0-13-600391-5

ISBN-10: 0-13-600391-5

"Modern Database Management ( $8^{th}$  edition)," Jeffrey A. Hoffer, Mary B. Prescott, and Fred R. McFadden, Prentice Hall, 2007. ISBN: 0-13-221211-0.

#### Tentative outline:

|         |   | Reading Assignment  |  |
|---------|---|---|--|
| Date    | Subject   | 8 <sup>th</sup> or 9 <sup>th</sup> 10 <sup>th</sup> edition |  |
| Week 1  | Database environment and  | Chapter 1 Chapter 1   |  |
|         | Development Process   | Chapter 2 Chapter 1   |  |
| Week 2  | Modeling Data in the Organization   | Chapter 3 Chapter 2   |  |
| Week 3  | Enhanced E-R model  | Chapter 4 Chapter 3   |  |
| Week 4  | Logical database design and the relational model  | Chapter 5 Chapter 4   |  |
| Week 5  | Logical database design (continued)   | Chapter 5 Chapter 4   |  |
| Week 6  | Physical DB design & Performance<br>Review for Midterm (Tuesday)  | Chapter 6 Chapter 5   |  |
|         | Midterm (Thursday): Chapters 1-6(5)   | Chapter 6 Chapter 5   |  |
| Week 7  | Introduction to SQL   | Chapter 7 Chapter 6   |  |
| Week 8  | Advanced SQL  | Chapter 8 Chapter 7   |  |
| Week 9  | SQL Exercises   | Lecture Notes   |  |
| Week 10 | Term Project discussion and   | Lecture notes   |  |
|         | Database access via Internet using ASP.NET  | Lecture notes   |  |
| Week 11 | Database access via Internet<br>using ASP.NET   | Lecture notes   |  |
| Week 12 | Database access via Internet using ASP.NET (continued).   | Lecture Notes   |  |
| Week 13 | Database access via Internet<br>Using ASP.NET (continued).  | Lecture notes   |  |
| Week 14 | Data and Database Administration  | Chapter 12 Chapter 11                                       |  |
| Week 15 | SQL Exercises and review for Final  | Lecture Notes   |  |
| Week 16 | Final Exam covers chapters 7, 8, and 12 (8 <sup>th</sup> or 9 <sup>th</sup> edition) chapters 6, 7, and 11 (10 <sup>th</sup> edition) |   |  |
|         | Time and Place: TBA (see on Blackboard)   |   |  |

January 2003

#### Honor Code for the College of Business Administration

As an academic community the College of Business Administration at the University of Illinois at Chicago is committed to providing an environment in which teaching, learning, research, and scholarship can flourish and in which all endeavors are guided by academic and professional integrity. All members of the college community – students, faculty, staff, and administrators – share the responsibility of insuring that high standards of integrity are upheld so that such an environment exists.

In pursuit of these high ideas and standards of academic life, as a student I hereby commit myself to respect and uphold the University of Illinois at Chicago (UIC) College of Business Administration Honor Code during my entire matriculation at UIC. I agree to maintain the highest moral and ethical standards in all academic and business endeavors and to conduct myself honorably as a responsible member of the college academic community. This includes the following:

- Not to seek unfair advantage over other students, including, but not limited to giving or receiving unauthorized aid during completion of academic requirements;
- To represent fact and self truthfully at all times;
- To respect the property and personal rights of all members of the academic community.

An abbreviated version of the Honor Code pledge may be printed on course syllabi, exam booklets, and other uses as deemed appropriate. The abbreviated version is as follows:

This course and its associated coursework are being administered under the policies of the University of Illinois at Chicago (UIC) College of Business Administration Honor Code. All students are expected to respect and uphold this code.

#### Honor Code Violations and Enforcement

Violations of the Honor Code are just causes for discipline under the University of Illinois at Chicago Student Disciplinary Procedure, and all allegations of Honor Code violations shall be handled pursuant to that Procedure.

(For a complete description of just causes for discipline, disciplinary procedures, and sanctions, see the pamphlet "Student Disciplinary Procedure of the Senate Committee on Student Discipline," available from the Office of the Dean of Students, SSB, Suite 3030, 1200 W. Harrison St., M/C 318.)

#### Honor Code Council

The Honor Code Council shall be formed consisting of two faculty members elected by faculty vote and six student members (two graduate students and four undergraduate students) appointed by the Assistant Dean for Student Services through recommendation of the Dean's Advisory Council (DAC). Each member will serve a term of one academic year, beginning in August. The Council shall elect a chairperson and a secretary.

The duties of the Honor Code Council shall include:

- Recommend changes in the Honor Code.
- Inform all students, staff, and faculty of the Honor Code and the procedures to be followed for pursuing alleged Honor Code violations.
- Ensure that the Honor Code is prominently displayed within the College of Business Administration and on course syllabi and exam booklets.
- Ensure that the Honor Code and related information are accurately described in the Graduate and Undergraduate catalogs.
- Work with the Office of Student Services to include the Honor Code in its promotion of the University of Illinois at Chicago College of Business Administration to potential students.
- Work with college administration to ensure that the Honor Code statement is signed by all students prior to their enrollment in the college.
- Inform all UIC faculty, staff, and students of the Honor Code of the College of Business Administration, and encourage the adoption of its principles.