CS 579 Database Management – Fall 2012 (North Campus)
Tuesday 6:00 – 9:00 PM

- **Instructor:** Jae Young Lee
- **Office:** Room 250, 808 Commonwealth Ave.
- **Phone:** 617-358-5165, **E-mail:** jaeylee@bu.edu
- **Office Hours:**
  - 5:00 – 6:00 PM Tuesday
  - By appointment

- **Course Objectives**
The goal of this course is to study basic concepts of database systems with emphasis on relational databases. The topics include:
  - Entity-relationship model
  - Relational data model
  - SQL DML and DDL
  - Relational algebra
  - Database design for relational databases
  - Functional dependencies and normalization
  - Indexes, stored procedures, and triggers
  - Introductory topics:
    - Introduction to query processing, transaction management, and concurrency control
    - Introduction to object-relational database
    - Introduction to database security
  - Other topics, if time allows

- **Prerequisites:** MET CS231 or MET CS232 or MET CS331 or instructor's consent


- **References:** Our textbook is comprehensive. There are also many good database books, and any book which you think would best suit your style should be OK as a reference. A book on SQL will be also helpful.

- **Grading:**
  - Midterm: 35%, Final: 35%
  - Homework: 15%
  - Class Project: 15%

- **Letter Grade:**
  - 90 ≤ G < 93: A-        93 ≤ G: A,
  - 80 ≤ G < 83: B-        83 ≤ G < 87: B
  - 70 ≤ G < 73: C-        73 ≤ G < 77: C
  - 60 ≤ G < 70: D        77 ≤ G < 80: C+
  - G < 60: F
• **Homework:**
  - There will be about six homework assignments.
  - Solutions will be discussed in the class when graded papers are returned.

• **Class Project:** This is a design and implementation of a database. The project follows a typical database design process and consists of four parts. Details will be discussed in the class.

• **DBMS:** To practice SQL statements and to do the implementation part of the class project, students need a database. So, students are required to install Oracle on his/her own machine. If a student wants to use a different DBMS (e.g., MySQL or MS SQL Server), he/she must obtain an approval from the instructor and the student is responsible for DBMS-dependent database features.

• **Academic Integrity Policy**
  - All assignments are individual work. Students are not allowed to copy/utilize other person’s work.
  - If you utilize external resources (other than those in our textbook) to do your homework or project, you must clearly show the sources of the resources as a list of references in your report.

• **Late Policy**
  All assignments are due at the beginning of the class on the due date unless otherwise noted. Penalty for late submission is 10% per day. An exception may be made if a student is in an unusual/urgent situation and receives permission from the instructor before the due date.

• **Make-up Exam**
  A make-up examination can be arranged only when a student has an emergency (a medical emergency or an urgent family matter). Students may need to provide the instructor with an appropriate document (such as a letter from a physician).

• **Tentative Schedule**
  - The following schedule is tentative and may be changed according to the actual progress of the class.
  - Students are strongly encouraged to read book chapters assigned for each lecture before coming to the class.

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<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Reading Assignment Book Chapter(s)</th>
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<td>2</td>
<td>9/11</td>
<td>Conceptual design with ER</td>
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<td>9/18</td>
<td>EER, Relational data model</td>
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<td>4</td>
<td>9/25</td>
<td>Logical design</td>
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<td>SQL</td>
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<td>6</td>
<td>10/9</td>
<td><strong>No class</strong> (substitute Monday classes)</td>
<td>Lab 1</td>
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<td>10/16</td>
<td>SQL</td>
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<td>10/23</td>
<td><strong>Midterm, SQL</strong></td>
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<td>9</td>
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<td>Intro to transaction management and concurrency control</td>
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<td>12/4</td>
<td>Intro to ORDBMS</td>
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<td>Intro to database security</td>
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<td>15</td>
<td>12/11</td>
<td>Other topics</td>
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<td>Final Exam</td>
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- **Communication**
  - All official communications will be made in the class.
  - All assignments will be posted on the class web page.
  - Assignment can be submitted as a hardcopy in the class or uploaded to the Blackboard drop box unless there is a specific instruction as to which method to use. **DO NOT submit your assignment via email.**
  - **Important:** If you miss a class you need to talk to a friend in the class or contact me to find out whether there was any important announcement.
  - **Urgent communication:** When it is necessary to communicate to you urgently, I will send an email to your BU email account. So, you need to check your BU email regularly (e.g., once a day).