1. Course Overview and Description
This course is designed to provide individuals with an introduction to database concepts and the relational database model. Topics include SQL, normalization, design methodology, DBMS functions, database administration, and other database management approaches, such as client/server databases, object oriented databases, and data warehouses. At the completion of this course, students should be able to understand a user's database requirements and translate those into a valid database design. The emphasis will be on application development rather than system fundamentals.

2. Required Text

2.1 Reference

3. Grading
There will be several programming/homework assignments during the class, three of these will count towards your grade (you’ll get advanced notice). There will also be a mid-term and an end-term exam. These will be take home exams assigned a week before the due date.

Class participation and involvement counts. This should be an interactive experience. Please feel free to share information and ideas. Be willing to assist others.

*The will be a final project or paper due toward the end of the semester.* The purpose of this is to encourage extensive research in the database field.

*There will be no makeup tests (mid-term and end-term exams) or extended deadlines.* Submitting the test on an alternative date is at the discretion of the instructor, but prior arrangements should be made (unless, in case of emergencies, in which case, proper documents should be provided).

3.1 Point Allocation:
- Assignments 1-3: 5% each
- Final Project/Paper: 30%
- Mid-Term: 25%
- End-Term: 25%
- Participation: 5%
4. Attendance
Attendance will be taken at each class but it is not mandatory. However, if you do not attend class regularly, you will have a high probability of failing. Participation is important to fully appreciate the subject. If you cannot make a class for some reason (travel, business commitments, etc.) try to let me know.

5. Course Outline
Table 1 is a rough outline of the course. This schedule may change depending on the pace of the class and threads of discussion. Assignment dates are not shown here. These will be provided at a later date.

<table>
<thead>
<tr>
<th>Session</th>
<th>Date</th>
<th>Topic</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>08/20/05</td>
<td>Overview &amp; Introduction to DBMS</td>
<td>Covers ER Model</td>
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<tr>
<td>2</td>
<td>08/27/05</td>
<td>Relational Model</td>
<td>Paper Assignment</td>
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<tr>
<td>3</td>
<td>09/10/05</td>
<td>Relational Algebra and Calculus</td>
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<tr>
<td>4</td>
<td>09/11/05</td>
<td>SQL: Queries, Constraints, Triggers</td>
<td>Mid-term Handout</td>
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<tr>
<td>5</td>
<td>09/17/05</td>
<td>Database Application Development</td>
<td>Mid-term Due</td>
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<tr>
<td>6</td>
<td>09/24/05</td>
<td>Database-Internet Applications</td>
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<td>7</td>
<td>10/01/05</td>
<td>Database-Internet Applications</td>
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<tr>
<td>8</td>
<td>10/02/05</td>
<td>Systems Basics: Storage, Transactions</td>
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<td>9</td>
<td>10/08/05</td>
<td>Schema Refinement, Normalization</td>
<td>End-term Handout; Paper Due</td>
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<tr>
<td>10</td>
<td>10/15/05</td>
<td>XML Data Management</td>
<td>End-term Due</td>
</tr>
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Table 1: Course Outline

6. Programming Assignments
There may be some programming assignments but these will be to provide hands on experience with databases. The programs will be graded 80% on correctness and 20% on style (general structure, comments, etc.)

7. Slides, Links and News
I will try to have the slides for each class available on a web site at:

http://www.cs.hofstra.edu/~csjc/Fall05

These will be available in HTML and PowerPoint formats. There will also be helpful and interesting links along with news items.

8. Class Rules
- Unless specifically stated otherwise, assignments are to be completed individually. You are encouraged to discuss the understanding of a particular issue or class material with fellow students, but code and solutions have to be your own effort.
- Academic honesty is to be taken very seriously. If you submit work that references another person’s efforts, then you must properly attribute it to that person, otherwise it is plagiarism and you will receive zero credit.
- This is not a course on how to crack systems, however, it is practically impossible for us to avoid discussing concrete security weaknesses in existing systems. Any attempt to use such information to gain unauthorized access to any system will be dealt with harshly.