Course: Database Management Systems (MIS 310)  
Meeting Place: Planetary Hall 224  
Meeting Time: Tuesdays 4:30pm – 7:10pm  
Website: http://mymason.gmu.edu/  
Prerequisite: MIS 301

Instructor:  
Professor: Min Chen, Ph.D.  
Office: Enterprise Hall 140  
Phone: (703) 993-4276  
Email: mchen15@gmu.edu  
Office Hour: Mondays & Tuesdays 1:30-3:00pm or by appointment

Course Materials


b. Required Software: Microsoft Access 2010 and Microsoft Visio Professional 2010 are required for this course. These software are available for free download and installation on your personal computers through the Microsoft Developer Network Academic Alliance (MSDNAA). Instructions on how to download the software will be posted on Blackboard. Note that there are no Mac versions of the software. It is your responsibility to make sure your assignments meet the required PC standards.

c. This course will use Blackboard to deliver course materials such as lecture notes, announcements, online discussions, and assignments, etc. Additional materials beyond the textbook may also be posted on Blackboard. It is important for you to visit Blackboard (http://mymason.gmu.edu) regularly for course materials and announcements.

Course Description

Computerized databases are vital to the functioning of modern organizations. Businesses collect large amount of data such as names, addresses, and credit card numbers on a daily basis. All this information is stored in databases. With the proliferation of the Internet and the means to capture data in computerized form, a vast amount of data is available at the click of a mouse button. Organizing these data for ease of retrieval and maintenance is paramount. Thus managing databases has become a vital task in most organizations.

In this course, we will study the fundamental concepts and techniques of modeling and designing relational databases. We will discuss why databases are used, and describe the main components of database management systems. Further, we will cover the fundamental Structured Query Language (SQL) statements used to define and process databases. Using a wealth of sample databases and examples, students will gain skills to systematically solve basic and advanced problems in query formulation, data modeling, and normalization. The course will use Microsoft Access as the relational database management system to implement the concepts covered in class.

Learning Objectives

a. Describe the components of a database management system.
b. Introduce the relational model and define key relational database terms.
c. Apply the Structured Query Language (SQL).
d. Model relational databases using Microsoft Visio.
e. Design practical databases using Microsoft Access.
Learning Goals

Learning goals for the SOM Undergraduate Programs

a. Our students will be competent in their discipline.
b. Our students will be aware of the uses of technology in business.
c. Our students will be effective communicators.
d. Our students will have an interdisciplinary perspective.
e. Our students will be knowledgeable about global business and trade.
f. Our students will recognize the importance of ethical decisions.
g. Our students will be knowledgeable about the legal environment of business.
h. Our students will be knowledgeable about team dynamics and the characteristics of effective teams.
i. Our students will understand the value of diversity and the importance of managing diversity in the context of business.
j. Our students will be critical thinkers.

Learning Goals of the Information Systems and Operations Management Program

a. Apply knowledge of information technology and business functions to understand its application in assessing, designing and improving business processes.
b. Develop data organization, storage and processing solutions to support organizational needs for information management. They will also have the option of developing skills in the area of supporting decision making through business intelligence solutions.
c. Use knowledge of computer networks as part of the IT solutions for improving business processes. They will also have option of developing more advanced skills in the areas of network and security.
d. Effectively manage information technology projects.
e. Understand the overall systems development life cycle and be able to recommend IT system solutions accordingly. They will also have option of learning appropriate development tools to develop prototype of IT solutions for business management.

Grading

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation</td>
<td>Students are expected to actively participate in discussions at the classroom.</td>
<td>5%</td>
</tr>
<tr>
<td>Assignments</td>
<td>Four (4) assignments will be given during the semester. These will consist of problem sets designed to give you valuable practice and enhance your understanding of the concepts covered in class. Instructions for the homework assignments and submission guidelines will be posted on blackboard.</td>
<td>24%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>The quizzes will consist of true/false, multiple choice, fill in blank, or short answer type questions based on the lectures, book, and other required readings. If you take all Five (5) quizzes, only your best four (4) scores will be used in the final grade calculation. Quizzes are closed book and closed notes and will be given at the beginning of classes on the dates designated on the course schedule.</td>
<td>16%</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>Cover the first half of the semester. Scheduled on Tuesday, October 8th 2013. Closed-book and closed-notes.</td>
<td>25%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>Cover the entire semester. Scheduled at 4:30 pm on Tuesday, December 10th 2013. Closed-book and closed-notes.</td>
<td>30%</td>
</tr>
</tbody>
</table>

Students must be officially registered in this course to receive a grade. It is the sole responsibility of the student to verify their own registration status. Specifically, you will not receive a grade if your name does not appear on the official class list. (Don’t wait until the end of the semester to be surprised.) Registration problems should be directed to either the SOM Office of Student Services or the Registrar’s Office.
Grading for the course will be based on total points earned by the end of the course. Final course letter grade assignments will approximate the table below:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>93% - 100%</td>
</tr>
<tr>
<td>A-</td>
<td>90% - 92.99%</td>
</tr>
<tr>
<td>B+</td>
<td>87% - 89.99%</td>
</tr>
<tr>
<td>B</td>
<td>83% - 87.99%</td>
</tr>
<tr>
<td>B-</td>
<td>80% - 82.99%</td>
</tr>
<tr>
<td>C+</td>
<td>76% - 79.99%</td>
</tr>
<tr>
<td>C</td>
<td>70% - 75.99%</td>
</tr>
<tr>
<td>D</td>
<td>60% - 69.99%</td>
</tr>
<tr>
<td>F</td>
<td>below 60%</td>
</tr>
</tbody>
</table>

If you have a question about your grade or you believe that you were graded incorrectly, please submit a formal request describing the situation and the reasons that justify your request for re-grading. In this case, I will re-grade the entire work, and the grade may go up or down. You can request a review of any grade within one week following the day the graded assignment/quiz/exam is discussed or returned to the class. After that period no grade will be revised.

You are also required to keep all graded material that is returned to you till after the semester is over and you have checked your final grade. If there is a discrepancy between my records and your scores for any of the graded material at any time, my records will be altered only if you can produce the graded material that I have returned to you as evidence – failing which no changes will be made.

**Class Participation**

All students are expected to participate in class discussions. Your participation (e.g., ask and answering questions) is highly recommended for this course and counts for 5% of the final course grade. Quality of contribution in class is much more important than quantity.

All students are expected to conduct themselves in a professional manner. Engaging in activities that are unrelated to the class such as, texting, playing on laptop, doing work of other classes, or anything else that detracts from the in-class learning environment (e.g., coming late, leaving early or in the middle of a class) is not acceptable and will affect your participation grade. Be courteous to and respectful to your colleagues and the instructor in class. Please do not bring and eat foods during class.

**Course Policies**

**Honor Code**

The Honor Code is an integral part of university life. Students are responsible, therefore, for understanding the code’s provisions. In the spirit of the code, a student’s word is a declaration of good faith acceptable as truth in all academic matters. Cheating and attempted cheating, plagiarism, lying, and stealing of academic work and related materials constitute Honor Code violations. To maintain an academic community according to these standards, students and faculty must report all alleged violations to the Honor Committee. Any student who has knowledge of, but does not report, a violation may be accused of lying under the Honor Code.

The University’s Honor Code is designed to ensure that the principles of academic honesty and integrity are upheld. All students are expected to adhere to this code. All acts of academic dishonesty will be dealt with in accordance with the provisions of this code. More detail on University’s Honor Code available online at [http://catalog.gmu.edu/content.php?catoid=17&navoid=1310#Honor](http://catalog.gmu.edu/content.php?catoid=17&navoid=1310#Honor).

**Attendance**

Class Attendance is your responsibility and mandatory, and you are solely responsible for all assignments, discussions, material presented/provided and announcements made in class.

**Late Assignment**

Late assignment submissions are subject to penalties:

- 1 day late (within 24 hours) ...................... 30%
- penalty after the 2nd day (24 hours) .............. not accepted

**Make up Exams/Quizzes**

Absence from an exam will result in a score of zero and makeup exams will not normally be offered. A student who misses an exam due to an emergency may petition for a makeup exam. The petition must be
in writing and be accompanied by appropriate documentation about the emergency. Petitioning for a makeup exam does not guarantee that one will be offered. That decision is at the sole discretion of the instructor who will determine whether the evidence offered by the student justifies the absence.

**Communications**

All communications from me to you will be directed via email. I will address all of my emails to your GMU email address for concerns of privacy and confidentiality. If you use another e-mail account as your primary email, please be sure to forward your GMU email to that account.

You are encouraged to post your questions related to the lectures and assignments to the Discussion Board on Blackboard.

**Announcements and Updates**

Announcements and updates may be posted on Blackboard; it is your responsibility to check Blackboard regularly for these and any supplemental course materials. Email announcements between class meetings may be sent to your GMU email account.

**Policy on Electronic Devices**

Technology can greatly assist learning, but it can also be a distraction. Please keep cell phones, pagers, and other communicative devices stowed away and in silent/vibration mode. Laptops or other electronic devices are not allowed to use in class unless permitted by the instructor. Engaging in activities not related to the course (e.g., gaming, email, chat, etc.) is strictly prohibited and will affect your participation grade.

**Disability**

If you are a student with a disability and you require academic accommodations, please see me and contact the Office of Disability Services (ODS) at (703) 993-2474 (http://ods.gmu.edu/), at the beginning of the semester. All academic accommodations due to disability must be arranged through the ODS and should be made during the first two weeks of the semester.

**Tentative Course Schedule**

This schedule is subject to change and any change will be duly announced in the class and/or in Blackboard.

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topics</th>
<th>Deliverables</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8/27</td>
<td>Ch. 1: Database Fundamentals (Getting Started)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>9/3</td>
<td>Ch. 1: Database Fundamentals (Getting Started)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>9/10</td>
<td>Ch. 2: The Relational Model</td>
<td>Assignment 1 due</td>
</tr>
<tr>
<td>4</td>
<td>9/17</td>
<td>Ch. 2: The Relational Model (Normalization)</td>
<td>Quiz 1</td>
</tr>
<tr>
<td>5</td>
<td>9/24</td>
<td>Ch. 3: Structured Query Language (SQL) – Part 1 *</td>
<td>Assignment 2 due</td>
</tr>
<tr>
<td>6</td>
<td>10/1</td>
<td>SQL exercise using Microsoft Access *</td>
<td>Quiz 2</td>
</tr>
<tr>
<td>7</td>
<td>10/8</td>
<td>Midterm Exam</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>10/15</td>
<td>NO CLASS – COLUMBUS DAY</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>10/22</td>
<td>Ch. 4: Data Modeling</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>10/29</td>
<td>Ch. 4: Data Modeling</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>11/5</td>
<td>Data Modeling exercise using Microsoft Visio *</td>
<td>Quiz 3</td>
</tr>
<tr>
<td>12</td>
<td>11/12</td>
<td>Ch. 5: Database Design</td>
<td>Assignment 3 due</td>
</tr>
<tr>
<td>13</td>
<td>11/19</td>
<td>Ch. 5: Database Design *</td>
<td>Quiz 4</td>
</tr>
<tr>
<td>14</td>
<td>11/26</td>
<td>Ch. 3: Structured Query Language (SQL) – Part 2 *</td>
<td>Assignment 4 due</td>
</tr>
<tr>
<td>15</td>
<td>12/3</td>
<td>Review</td>
<td>Quiz 5</td>
</tr>
<tr>
<td>16</td>
<td>12/10</td>
<td>Final Exam (Starts at 4:30 pm)</td>
<td></td>
</tr>
</tbody>
</table>

* You are encouraged to bring your laptop to class.
HONOR CODE

To promote a stronger sense of mutual responsibility, respect, trust, and fairness among all members of the GMU community and with the desire for greater academic and personal achievement, we, the student members of the University Community have set forth this honor code:

Student members of the George Mason University community pledge not to cheat, plagiarize, steal, or lie in matters related to academic work. The Honor Code of George Mason University deals specifically with cheating and attempted cheating, plagiarism, lying, and stealing.

A. **Cheating encompasses the following:**
1. The willful giving or receiving of an unauthorized, unfair, dishonest, or unscrupulous advantage in academic work over other students.
2. The above may be accomplished by any means whatsoever, including but not limited to the following: fraud; duress; deception; theft; trick; talking; signs; gestures; copying from another student; and the unauthorized use of study aids, memoranda, books, data, or other information.
3. Attempted cheating.

B. **Plagiarism encompasses the following:**
1. Presenting as one's own the words, the work, or the opinions of someone else without proper acknowledgment.
2. Borrowing the sequence of ideas, the arrangement of material, or the pattern of thought of someone else without proper acknowledgment.

C. **Lying encompasses the following:**
The willful and knowledgeable telling of an untruth, as well as any form of deceit, attempted deceit, or fraud in an oral or written statement relating to academic work. This includes but is not limited to the following:
1. Lying to administration and faculty members.
2. Falsifying any university document by mutilation, addition, or deletion.
3. Lying to Honor Committee members and counsels during investigation and hearing. This may constitute a second charge, with the committee members who acted judges during that specific hearing acting as accusers.

D. **Stealing encompasses the following:**
Taking or appropriating without the permission to do so, and with the to keep or to make use of wrongfully, property belonging to any of the George Mason University community or any property located on the university campus. This includes misuse of university computer resources (see the Responsible Use of Computing Policy section in the “General Policies” chapter). This section is relevant only to academic work and related materials.

Source: George Mason University Faculty Handbook http://www.gmu.edu/facstaff/handbook/aD.html