Database Management Systems - IS 475/595, Spring 2012, Room: BC 115; MW, 2:30-3:45 p.m.
Classes: MWF 12:30-1:20, BCIS 350/540 in GU 303
         MW 10:00-11:15, BCIS 450/580 in GU 303
         MW 2:30-3:45, BCIS 475/595 in BC 115

Office: Guthrie 206
Office phone: 546-2990
E-mail: jkreie@nmsu.edu
My web page: http://web.nmsu.edu/~jkreie
Blackboard: http://learn.nmsu.edu/

Office Hours: Thursday: 9:00-10:30 AM in GU 206,
              Thursday: 2:00-3:30 PM in GU 206,
              Friday: 9:30-10:30 AM in GU 206,
              Friday: 1:30-2:30 PM in GU 303.
Or, by appointment.

Text - Database: Design, Application Development, & Administration, current edition: 4th, M. V. Mannino, McGraw-Hill Irwin. The textbook uses two databases which will be available through Blackboard for this course. One database is the basis for chapter examples and the other is used for end-of-chapter problems. Note: If you buy an older edition, the sequence of a few chapters will be somewhat different but the content and examples remain pretty much the same. End-of-Chapter exercises, however, may differ and you must use the current book for these, if they are assigned. A copy of the textbook is in the lab and available for use while you're in the lab. (This book was paid for by a donation from one of our graduates.)

Course Description - This course teaches database concepts, with a focus on relational databases. This course covers concepts about building, managing, and using databases and includes extensive coverage of SQL (structured query language), the standard language of relational databases. The coverage of SQL will include DDL (data definition language) used to construct a database, DML (data manipulation language) used for basic and advanced queries and embedded SQL in procedural programming languages for custom applications. This course will also introduce database management concepts that deal with managing users and physical storage. Data warehouses and data mining will be covered and current topics, such as "No SQL" will be presented. Prerequisites: IS 350/450 with a grade of "C" or better.

Course Objectives - The student who completes this course should know:

1. The features of database management systems, such as Microsoft Access and Oracle.
2. Relational database concepts, such as 1st, 2nd, and 3rd normal form, and referential integrity.
3. SQL—the standard language of relational databases; including variations in Microsoft Access, Oracle, and, if time permits, SQL Server.
4. Query formulation—How to read a data model and design a query.
5. How embedded SQL is used in a procedural language (PL/SQL) for data processing. An introduction to PL/SQL will be covered.
6. Basic DBA activities to manage a relational database—manage physical storage, create databases, manage user accounts, and assign and monitor privileges.
7. The purpose of data warehouses and data mining.
8. Professional codes of ethics and ethical issues related to data.

Examinations - There will be three exams. The exams will cover material from the textbook and lectures. The final exam covers the material since the previous exam and any concepts and skills used throughout the course. Exams will be a combination of multiple choice, problems, and short answer. If you miss an exam due to illness, work, or a university-sponsored activity, you must provide proper notification to the instructor as soon as possible. If no valid excuse is provided the student will receive a score of zero for the missed exam.

Assignments and Quizzes - Assignment exercises will be assigned as individual work unless otherwise specified by the instructor. Students are expected to submit their own work. This is a senior-level course and most of you have worked together in previous classes so feel free to talk about assignment problems and help each other figure out solutions but don't copy/paste someone else's work and present it as your own. Submission of someone else's work as one's own, will result in a zero for that assignment. See the section on scholastic dishonesty for further penalties.

The exercises provide hands-on practice that is essential to learning the material. Several databases besides the ones provided by the textbook will be used throughout the course. Many of the in-class and homework exercises will mirror examples given in the textbook or the problems listed at the end of the chapter but the exercises will often use different databases than those presented in the textbook.

It is recommended that you type all the chapter examples to practice the SQL commands. One of the benefits of this textbook is that Mannino provides example SQL and example output. Typing the examples will help you understand how the SQL commands work. Also, many quiz and exam questions will come from the chapter examples and assigned exercises, with only minor changes, so they are good preparation for exams, as well as for mastering the material.
Individual exercises assigned to be done outside of class will be accepted late but there will be a 10% penalty for the first day late and an additional penalty for each day after that. Note: An assignment due at the beginning of class will have a 5% penalty if it is turned in at any time later that same day.

Exercises assigned to be completed in class will not be accepted late. Some quizzes and in-class exercises may be given as a team effort to provide students an opportunity to discuss concepts and help one another. If a team quiz is given, each member will receive the team score.

**Graduate Students** - Graduate students will complete an extra module for this course to receive credit for BCIS 595. This module will be posted before mid-semester.

**Attendance Policy** - Attendance is important to doing well in this class (just ask students from the previous semester). However, I will not take attendance. Lecture, discussion, and assignments are an essential part of learning the concepts and skills in this course. If a student misses a class, it is up to the student to find out what was covered by talking to other students, getting someone else’s notes, and checking the class Blackboard site. The student may get specific assignments from the instructor or ask the instructor specific questions after the student has reviewed the notes for the missed class.

**Class Procedures** - The teaching method for this course will include lecture/discussion, in-class exercises, and homework exercises. All individual exercises are to be done yourself. You’re welcome to discuss exercises with other students but if you just copy/paste someone else’s solution, you won’t learn how to use SQL.

**Online Procedures** - Most of the course material will be available through the Blackboard site for this class. There are topical areas in the Discussion section for major topics of this course. If you have a question about an assignment, please post the question in the Discussion section where everyone can benefit from the information. However, don’t use the Discussion section for personal communications. If you send a question about an assignment through Blackboard email, I may ask you to post in the Discussion section before I respond. Again, everyone should benefit from questions and answers about an assignment.

**Please note:** If you have a question about an exam or assignment score because the score is missing in Blackboard, please feel free to email me about the missing score. If you want to know why you got a particular score, i.e., what did you miss and why, please come see me in my office. I will not respond to emails that ask, “Why did I miss 5 points?” or “What did I do wrong on problem 6?” It takes too much time to review an exam or assignment and type out an explanation via email. Come to my office and you and I can review the score in question together. Often it is clear to the student what the error is when we review it and sometimes the student is able to explain something about his/her answer which I believe justifies additional credit.

**Students with Disabilities** - If you have, or believe you have a disability, you may contact the Student Accessibility Services (SAS) Office located in Corbett Center, Room 244, 575-646-6640, or email sas@nmsu.edu. Appropriate accommodations may then be provided for you. All medical information will be treated confidentially. If you have a condition which may affect your ability to exit safely from the premises in an emergency during class, you are encouraged to discuss this in confidence with the instructor and/or the Director of University Disability Services/ADA Coordinator, Diana Quintana, at the SAS Office. Questions regarding the Americans with Disabilities Act (ADA) and/or the American with Disabilities Amendment Act should be directed to the SAS Office. Questions regarding NMSU’s Non-discrimination Policy and discrimination complaints should be referred to Gerard Navarre, Office of Institutional Equity, 575-646-3636.

**Scholastic Dishonesty** - Scholastic dishonesty will not be tolerated. The penalty for dishonest behavior can range from receiving a zero for an assignment or exam to censure from the University (Please refer to the NMSU Student Handbook [http://www.nmsu.edu/~vpsa/handbook.html](http://www.nmsu.edu/~vpsa/handbook.html)).

**Point Distribution and Grades** - The points possible for this course will be approximately as follows:

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<tr>
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<th>% of Overall Grade</th>
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<tbody>
<tr>
<td>Exam 1</td>
<td>22%</td>
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<tr>
<td>Exam 2</td>
<td>22%</td>
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<tr>
<td>Final Exam</td>
<td>22%</td>
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<tr>
<td>Quizzes and in-class &amp; homework exercises</td>
<td>34%</td>
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Grades will be assigned as follows:
A: 90% through 100%
B: 80% through 89%
C: 70% through 79%
D: 60% through 69%
F: Below 60%