ISM 671: Database Systems

Fall 2016

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CATALOG DESCRIPTION:
Fundamental concepts of database management systems, including database design, implementation, and the use of the SQL query language.

STUDENT LEARNING OUTCOMES:
Upon successful completion of this course students will be able to:
1. Model database requirements using the Entity-Relationship diagram;
2. Apply the concepts of normalization in database design;
3. Design and implement a relational database;
4. Address issues related to concurrent data access;
5. Apply methods to address various database security issues;

REQUIRED MATERIAL:
- Canvas Course Management Systems (https://canvas.uncg.edu)
This course is offered as a face-to-face lecture format, however, some of our individual classes will be delivered on-line. All needed learning resources except, your textbook, are available electronically via UNCG’s Canvas software. Please sign into Canvas to gain access to the material. It is your responsibility to have read the readings assigned to you prior to coming to class. In addition to the text books, and other teaching material, articles from both academic and practitioner publications will be posted on the Canvas. Course materials, announcements and updates will be posted on Canvas regularly. Web-based learning area developed for this course is only accessible via Canvas. I request you to check daily.
- MySQL account (https://baelearn.uncg.edu/sql/)
This course will use MySQL as its database management system. MySQL is a powerful, free and widely used database management system and can be accessed for free via the link above. It will be your primary working environment. I will provide you with your access credentials in the second week of the course. You can also download your own copy of MySQL via the Internet. Google it.

EVALUATION AND GRADING:
- Assignments
SQL programming assignments and database design assignments constitute a major portion of the requirements for this course. Students are required to complete one wiki assignment, three SQL query set assignments on a database and two database design assignments. Each assignment is due at 11:59 pm on the scheduled due date. Assignments turned in late will be assessed a grading penalty. Assignments submitted after the due date may not be accepted but, if they are based on valid excuse, there will be a minimum of a 20% reduction for each day late. Please do not procrastinate on the assignments.
• **Group Project**
  Each student is required to join a group of three individuals to work on a database project. More details about the project will be given during the course.

• **Mid Term and Final Exams**
  This course has one mid-term and a comprehensive final exam. No makeup examination is offered for any reason. Both exams may require the use of MySQL software. Students are required to take the exams during the time specified in the course syllabus. If a student must miss an exam and has a written verifiable legitimate excuse for the absence, the student will receive an incomplete for the course that needs to be completed at later date at discursion of the instructor. The final exam is cumulative. More will be discussed about the exam.

• **COURSE SCHEDULE (subject to change)**

<table>
<thead>
<tr>
<th>Week</th>
<th>Topics</th>
<th>Assignment Due</th>
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<tbody>
<tr>
<td>1</td>
<td>Welcome to ISM671: Introduction to data, information and RDBMS</td>
<td>First assignment due on August 23</td>
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<tr>
<td>2</td>
<td>Introduction to SQL</td>
<td>First SQL assignment due</td>
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<tr>
<td>3</td>
<td>Querying single table</td>
<td>Second SQL assignment due</td>
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<tr>
<td>4</td>
<td>Querying multiple tables</td>
<td>Third SQL assignment due</td>
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<td>5</td>
<td>Advanced SQL</td>
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<td>6</td>
<td>Conceptual database design I: Introduction to entity, relationship and ERD</td>
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<td>7</td>
<td>Midterm Exam</td>
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<td>8</td>
<td>Conceptual database design II: Refining ERD</td>
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<td>9</td>
<td><strong>Have A Nice Fall Break!</strong></td>
<td>ERD assignment due</td>
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<td>10</td>
<td>Logical database design</td>
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<td>11</td>
<td>Normalization</td>
<td>Logical model assignment due</td>
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<tr>
<td>12</td>
<td>Physical database design</td>
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<tr>
<td>13</td>
<td>Database administration and security, concurrency control and recovery management</td>
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<tr>
<td>14</td>
<td>Group project Review for final</td>
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<tr>
<td>15</td>
<td><strong>Happy Thanksgiving!</strong></td>
<td>Final report due</td>
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<tr>
<td>16</td>
<td>Final Exam</td>
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### Evaluation and Grading:

**Grading:** The course grade will be calculated using the following weights:

<table>
<thead>
<tr>
<th>Course Components</th>
<th>% of Grade</th>
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</thead>
<tbody>
<tr>
<td>Assignments</td>
<td>30%</td>
</tr>
<tr>
<td>Group Project</td>
<td>20%</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>20%</td>
</tr>
<tr>
<td>Final Examination – Integration/ synthesis</td>
<td>30%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

**Letter Grades and Points**
- 93-100%=A
- 90-92%=A-
- 87-89%=B+
- 83-86%=B
- 80-82%=B-
- 77-79%=C+
- 73-76%=C
- Below 73%=F

**Attendance Policy:**
Students are expected to attend all classes and meetings related to course material. It is the student’s responsibility to stay on track with readings and assignments to be successful in the course.

**Netiquette:**
The same guidelines that apply to traditional classes should be observed in the virtual classroom environment. Please use proper netiquette when interacting with class members and the professor.

**Policy on Server Unavailability or Other Technical Difficulties**
The university is committed to providing a reliable online course system to all users. However, in the event of any unexpected server outage or any unusual technical difficulty which prevents students from completing a time sensitive assessment activity, the instructor will extend the time windows and provide

**Electronic Mail and Canvas Accounts:**
You should check your UNCG email and Canvas course link regularly as I may send email updates or add new info on Canvas on an ongoing basis. You will be responsible for any information or announcements contained in the email messages or updates on Canvas.

**Academic Integrity Policies:**
Students in the Bryan School must conform to all existing principles found in UNCG’s Academic Integrity Policy and the Student Code of Conduct. Further details may be found at the following site: [http://sa.uncg.edu/handbook/](http://sa.uncg.edu/handbook/)

**Expectations of Faculty and Students in the Bryan School:**
Students should read the Guidelines for Faculty and Students presented on the web pages found at: [http://www.uncg.edu/bae/faculty_student_guidelines.pdf](http://www.uncg.edu/bae/faculty_student_guidelines.pdf)

**Course Evaluation**
Each student will be asked by the University to complete an on-line course evaluation near the end of the course. This evaluation is important to the University in its efforts to continually improve the delivery of courses. More information about the evaluation will be provided later in the course.

**Course Routine and Schedule**
To provide some structure to each week of study, we will follow the routine described below:
On each **Monday to Wednesday** of a particular week, check the Canvas for that week. You should look for the online of topics for the week, and download and start reading the week’s reading and plan on viewing the multimedia files, etc.

By **Thursday or Friday** of each week, you should have completed the readings and tutorial and start working on any assignments. In those days, you should look on Canvas a couple of times a day for Discussion Board questions, Blogs and Wikis to read and enter into the interactive exchanges with other students and the instructor. You should post your comments about the week’s readings, assignments or any other questions.

On **Saturday or Sunday** of the week, you should be wrapping up your reading and get ready for next week and get ready to submit any deliverables.

On **Monday**, of starting the second week of the course, you should upload your assignment, if any, to Canvas and start over.

I will respond to emails within 24 hours. I will read and post comments when appropriate in the discussion forums each week between Thursday and Sunday midnight. I will check course statistics each Sunday. The Grade book may be updated each Monday at 8 AM. You may access your grade via Canvas.

**What you need to take this course:**

1. Your readings list and individual articles and readings in that list for each week.
2. You must have access to a computer that connects to the Internet. The course materials are only accessible online by logging in to canvas.uncg.edu - your student identification number is required. If you do not own a computer, the computer labs on campus will be open during this semester.
3. You must have a working e-mail account. Your first assignment will be to update your e-mail address on the course Web site. Instructions are online at canvas.uncg.edu - you must log in to see the course materials.
4. Because of e-mail viruses, Prof. Nemati does not accept e-mail from unknown sources. Therefore, you must use the subject ISM 671 and your full name typed in the message, or the e-mail may be ignored.
5. It’s impossible for Prof. Nemati to be familiar with every software application on the market, so please don’t ask for technical assistance.
6. You must check your e-mail account regularly throughout the semester. Official announcements will be made by e-mail, and on the course Web site at canvas.uncg.edu.
7. You are responsible for saving all assignments correctly, so you can turn them in electronically. You should be comfortable using word processing software, and have reasonable keyboarding skills. All assignments will REQUIRE you to use word processing or text editing software. No assignments will be accepted in handwritten form.
8. Supplies: Although you will be publishing (uploading) your assignments, it's a good idea to keep copies of everything.

**A note about you and this course**

Students learn best in quite different ways. One of the advantages of the online format of the course is that it allows students to approach the course in ways that suit their personal styles and preferences. In classrooms, instructors are inclined to teach either as they themselves were taught, or as they think "the average student" prefers. Online, all of the instructor-presented class material is laid out at once, and students can do with it whatever they prefer in order to learn in as personal and unique a fashion as possible.

To understand how you might learn best and how you might approach the course, it's suggested that you complete a learning style inventory, use the information given to figure and interpret your score, and plan your learning strategy accordingly. Another couple of online tools of this sort are the Keirsey Temperament Questionnaire (http://www.keirsey.com/sorter/register.aspx) and the Keirsey Character Questionnaire (http://www.keirsey.com/).

This course by design specifically accommodates different learning styles by involving a variety of components, including text, video clips, self-check quizzes, reference lists, online discussion, blogs and wikis. Since you are probably used to learning more or less as prescribed or required by a classroom teacher and are
not used to designing your own learning strategy, it might take a little time to do that and to settle into a comfortable routine. I think you'll find that as you figure out on your own (and with the help of the online questionnaires mentioned) how to learn the material, everything will fall into place. Online learning, you will find, is quite different than classroom learning. It requires different attitudes, responsibilities, and communication skills.

**Emails:**
- Always include a subject line.
- Remember without facial expressions some comments may be taken the wrong way. Be careful in wording your emails. Use of emoticons might be helpful in some cases.
- Use standard fonts.
- Do not send large attachments without permission.
- Special formatting such as centering, audio messages, tables, html, etc. should be avoided unless necessary to complete an assignment or other communication.
- Respect the privacy of other class members

**Discussion Groups:**
- Review the discussion threads thoroughly before entering the discussion. Be a lurker then a discussant.
- Try to maintain threads by using the "Reply" button rather starting a new topic.
- Do not make insulting or inflammatory statements to other members of the discussion group. Be respectful of other’s ideas.
- Be patient and read the comments of other group members thoroughly before entering your remarks.
- Be cooperative with group leaders in completing assigned tasks.
- Be positive and constructive in group discussions.
- Respond in a thoughtful and timely manner.

**On-line Chats:**
- Introduce yourself to the other learners in the chat session.
- Be polite. Choose your words carefully. Do not use derogatory statements.
- Be concise in responding to others in the chat session.
- Be prepared to open the chat session at the scheduled time.
- Be constructive in your comments and suggestions.