90-728: Introduction to Database Management
Fall 2014, Mini-Semester 2
Sections A2, B2, C2, D2

Instructor:
Karyn Moore karyn@cmu.edu, 3014 HB, 412-268-8465
Office Hours: Wednesday, 4:30 – 5:30, Thursday, 10:30 – noon, 4:30 – 5:30, and other times by appointment.

Faculty Assistant:
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Teaching Assistants:
(Office hours & location will be posted on Blackboard for each TA by end of first week)

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Meeting Times and Locations:

Section A2 – Monday, Wednesday, 1:30 – 3:00, Room HBH 239
Section B2 – Monday, Wednesday, 3:00 – 4:30, Room HBH 239
Section C2 – Tuesday, Thursday, 1:30 – 3:00, Room HBH 239
Section D2 – Tuesday, Thursday, 3:00 – 4:30, Room HBH 239

Class Web Site: http://www.cmu.edu/blackboard

Textbooks

Please bring this book to class every week.

Course Rationale

Most organizations depend on databases for delivery of goods and services, allocation of resources, and support of management decision making and policy analysis. Policy analysts and managers also find database packages like Microsoft Access valuable for personal use, especially in getting data ready for use.

Course Objectives

Almost all databases used in organizations today are relational databases—the most flexible and easiest to use type of database. This course covers design and implementation of relational databases at the introductory level, including tables, forms, queries, and reports.

At the end of the course, you will able to:

- Formulate basic and advanced relational database queries using a query tool such as Access’s Query by Example.
- Create database queries using Structured Query Language (SQL)
- Describe the rationale for the basic design principals of relational databases such as referential integrity and foreign keys.
- Interpret an entity relationship diagram for an existing relational database including participation and cardinality.
- Create an entity relationship diagram based on an organization’s data and business rules.
- Illustrate special cases of database designs including unary relationships, generalization classes, and case life cycle representation.
- Create a physical relational database design based on an entity relationship diagram.
- Design and implement simple customized database user interfaces including forms and reports using a development tool.
- Use macros to automate the use of Access and Excel for data analysis.

Course Structure

The class meetings consists of lectures, discussions, and in-class Access labs. The labs are integrated into the lecture and/or occur after the lecture. You do not need to bring your laptop to class.
The course content is organized as follows:

I. Effective & efficient use of database systems.
   - Relational database architecture Lectures 1 – 3
   - Database queries. Lectures 4 – 8

II. Database systems design and development.
   - Relational database design and modeling Lectures 9 - 10
   - End-user development of basic database components: tables, reports, and forms Lectures 11 – 12

III. Use of Access & Excel for basic data analysis. Lectures 13 - 14

Course Schedule

Please refer to the separate document titled Course Schedule for a listing of weekly lecture topics, labs and assignments. Assignment due dates are also posted in the Course Schedule.

Student Evaluation

Your work will be evaluated on a combination of individual homework assignments, a group database project, quizzes, and a final exam.

Final grades are based on the following weights:

- Individual assignments (4) 16%
- In-class assignments (3) 3%
- Prep work assignments (3) 3%
- Group project (2 parts) 16%
- Quizzes (2)* 0-10%
- Final exam 62-52%
Total 100%

*Quizzes only count toward your final grade when the score on the quiz is greater than your score on the final exam. Otherwise – the quiz score does not count.
Final letter grades are assigned to your body of work in this course according to the following scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage Range</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>97% to 100%</td>
<td>Exceptional</td>
</tr>
<tr>
<td>A</td>
<td>93% to 96%</td>
<td>Excellent</td>
</tr>
<tr>
<td>A-</td>
<td>90% to 92%</td>
<td>Very Good</td>
</tr>
<tr>
<td>B+</td>
<td>87% to 89%</td>
<td>Good</td>
</tr>
<tr>
<td>B</td>
<td>83% to 86%</td>
<td>Acceptable</td>
</tr>
<tr>
<td>B-</td>
<td>80% to 82%</td>
<td>Fair</td>
</tr>
<tr>
<td>C+</td>
<td>77% to 79%</td>
<td>Poor</td>
</tr>
<tr>
<td>C</td>
<td>73% to 76%</td>
<td>Very Poor</td>
</tr>
<tr>
<td>C-</td>
<td>70% to 72%</td>
<td>Minimal Passing</td>
</tr>
<tr>
<td>R</td>
<td>less than 70%</td>
<td>Failing</td>
</tr>
</tbody>
</table>

The average grade in a required Heinz course is expected to be 3.33-3.4, equivalent to a B+. This expected average reflects the degree of difficulty and/or breadth of coverage for a core course. I do not apply any curve when determining students’ final grades.

**Late Homework Policy and Make-up Exams**

**Assignments**

Normally, late homework is not accepted without prior approval. If you have an extenuating circumstance (illness, accident, unexpected family matter, etc.), notify me as early as possible and I will take that into consideration.

**You will have ONE late pass you can use on an individual assignment (not the prep work or group work.) The late pass allows you to submit the assignment work 48 hours (2 days) after the due date and still receive full credit.**

**Exam Date**

You are expected to take the final exam at the time indicated on the Course Schedule. If you need to take the final exam at a different time, you should bring this request to me as soon as possible, and at least one week before the scheduled exam. Please be aware that I may not grant your request.

**Policy on Collaboration and Cheating**

Excluding assignments that are assigned as group work, the work you submit should reflect individual effort. You are encouraged to discuss assignments with fellow students, but the final work product must reflect your knowledge and effort, not your classmates’.
Cheating includes but is not necessarily limited to:

1. Submission of work that is not your own for papers, assignments, lab exercises, or exams.
2. Submission or use of falsified data.
3. Theft of or unauthorized access to an exam, current or previous.
4. Use of an alternate, stand-in or proxy during an examination.
5. Use of unauthorized material including textbooks, internet material, notes, or computer programs in the preparation of an assignment or during an examination, unless otherwise indicated.
6. Supplying or communicating in any way unauthorized information to another student for the preparation of an assignment or during an examination.
7. Collaboration in the preparation of a solution to a problem unless expressly allowed by the instructor.
8. Plagiarism which includes, but is not limited to, failure to indicate the source with quotation marks or footnotes where appropriate if any of the following are reproduced in the work submitted by a student:
   a. A graphic element.
   b. A proof.
   c. A phrase, written or musical
   d. Specific language.
   e. An idea derived from the work, published or unpublished, of another person.
   f. Program code or algorithms.

If you are unsure about what is acceptable collaboration, you should consult with me.

Penalties for Cheating

Penalties imposed are at the instructor’s discretion. In this class, the penalty imposed can be any of the following depending on the violation:

- zero on the assignment
- a letter reduction on final grade (final grade of A- becomes B-)
- a failing grade in the course

Regardless of the penalty imposed, all incidents of cheating are reported to the Dean. Additional penalties may be imposed.

Classroom Etiquette

As research on learning shows, unexpected noises and movement automatically divert and capture people’s attention, which means you are affecting everyone’s learning experience if your cell phone, pager, laptop, etc. makes noise or is visually distracting during class. For this reason, your mobile devices should be silenced and not used during class.
You are not permitted to use your laptop or other electronic computing devices during class. Desktop computers in the classroom may only be used for in-class Access exercises.

Please limit your peer conversations during class. If you must chat with your neighbor, please sit at the far corners of the room to be less distracting. I may ask you to leave class if I find your repeated conversations distracting.

You may record classroom activities ONLY for personal, educational use or for the educational use of another student currently enrolled in the class. **You must first obtain my permission prior to recording any lecture.** The recording may not be further copied, distributed, published or otherwise used for any other purpose without my express written consent. All students are advised that classroom activities may be taped by students for this purpose.

I appreciate you arriving on time for class.