90-728: Introduction to Database Management
Draft Syllabus

Instructor
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Teaching Assistants
TBA

Meeting Times and Locations
TBA

Class Website
canvas.cmu.edu

Textbooks

There are no required texts. All reference material will be provided by the instructor.

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 be able to:

- Formulate basic and advanced relational database queries using a query tool such as Access’s Query by Example.
- 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.
- Create a physical relational database design based on an entity relationship diagram.
- Design and implement simple customized database user interfaces including forms created using a forms development tool.
- Use macros to automate the use of Access and Excel for data analysis.
- Create basic database queries using Structured Query Language (SQL)

Course Structure

The class meetings consist of lectures, discussions, and in-class exercises. The course content is organized as follows:

I. Effective & efficient use of database systems. (8 lectures)
   - Relational database architecture
   - Database queries

II. Database systems design and development. (3 lectures)
    - Relational database design and modeling
    - End-user development of basic database components: tables, reports, and forms

III. Use of Access & Excel for basic data analysis. (2 lectures)

Course Schedule

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

Student Evaluation

Your work will be evaluated on a combination of the following components:
• Prep work (2) 10%  Completed in advance of week’s lectures
• Individual assignments (7) 35%  Complete after week’s lectures
• In-class lab assignments (1) 5%  Completed in-class
• Quizzes (2) 30%  Timed online quizzes
• Final project (group work) 20%

Total 100%

Participation: You will have the opportunity to earn up to 1 additional point on your final course score through a variety of optional participation opportunities. These participation opportunities take the form of:

• Regular live participation during lectures, asking and/or answering questions
• Regular participation on Canvas discussion boards
• In-class exercises
• Prompt response to surveys (if any; to be announced by the instructor)

The participation point may help you achieve a better letter grade if your final course score sits near the borderline between two letter grades.

Final letter grades are assigned to your body of work in this course according to the following scale:

A+ 97% to 100%  Exceptional
A 93% to 96%  Excellent
A- 90% to 92%  Very Good
B+ 87% to 89%  Good
B 83% to 86%  Acceptable
B- 80% to 82%  Fair
C+ 77% to 79%  Poor
C 73% to 76%  Very Poor
C- 70% to 72%  Minimal Passing
R less than 70%  Failing

The average grade in a core 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. We may curve the grades depending on the overall performance of the class.

Regrade Policy

If you believe that your grade is inaccurate, you may request a regrade under the following conditions:
• Regrade requests must be submitted within 1 week of the date when the grade was returned.
• Regrade requests must be in writing (via email to the instructor and both TAs) and must include a copy of the original submission.
• Regrade requests must specify in detail the reasons you deserve a higher grade. These will typically be that the grader misread or misunderstood your answer or didn’t take something into account that they should have. For this, you should use the feedback comments as your reference point. Referencing another student’s grade is inappropriate and irrelevant. While we do our best to apply an even standard across students, we cannot discuss anyone else’s grade with you, so we need to deal with the merits of your particular case.
• I reserve the right to regrade the entire assignment and thus your grade may go up or down.
• Participation points are inherently subjective and not subject to a regrade request.

Late Submission Policy

Late Submissions

Normally, late submission is not accepted and will be subject to a late penalty of 10% per day. If you have an extenuating circumstance (illness, accident, unexpected family matter, etc.), notify the instructor and both TAs as early as possible and we will take that into consideration. No special accommodation can be granted last minute before or after a deadline.

You are allowed a total of 48-hour late pass on your ASSIGNMENTS. You can use it in one of the following ways:
• Apply it as ONE 48-hour late pass on an individual assignment, which allows you to submit assignment work 48 hours (2 days) after the due date and still receive full credit.
• Split it into TWO 24-hour late passes on two different assignments, which allows you to submit assignment work 24 hours (1 day) after the due date and still receive full credit.

Late passes are NOT applied automatically. You must inform via email BOTH TAs of the type of pass you would like to use PRIOR TO the assignment deadline. No late pass requests will be accepted after an assignment deadline.

Late passes are NOT APPLICABLE to prep works, lab assignments, quizzes, or the final project.

Quiz Dates

The dates for the Quizzes are posted on the Course Schedule on Canvas. For the two quizzes, you will be given 36 hours to take each quiz, although once you start, you will be required to complete the quiz within the designated time limit.
No make-up quizzes are given unless due to extraordinary circumstances outside of your control. You must notify the instructor within 24 hours after the quiz period has ended.

**Policy on Collaboration and Cheating**

Excluding assignments that are assigned as group work, the work you submit should reflect individual effort. You may 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 assignment.
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 course 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 Associate Dean. Additional penalties may be imposed.

Disability Accommodations

If you have a disability and are registered with the Office of Disability Resources, I encourage you to use their online system to notify me of your accommodations and discuss your needs with me as early in the semester as possible. I will work with you to ensure that accommodations are provided as appropriate. If you suspect that you may have a disability and would benefit from accommodations but are not yet registered with the Office of Disability Resources, I encourage you to contact them at access@andrew.cmu.edu.

Managing Stress and Obtaining Support

Take care of yourself. Do your best to maintain a healthy lifestyle this semester by eating well, exercising, avoiding drugs and alcohol, getting enough sleep, and taking some time to relax. This will help you achieve your goals and cope with stress.

If you experience any academic stress, difficult life events, or feelings like anxiety or depression, we strongly encourage you to seek support. Consider reaching out to a friend, faculty, or family member you trust for help getting connected to the support that can help. On campus, Counseling and Psychological Services (CaPS) is here to help. Contact them at: 412-268-2922; or http://www.cmu.edu/counseling/

If you or someone you know is feeling suicidal or in danger of self-harm, call someone immediately, day or night:

CaPS: 412-268-2922; http://www.cmu.edu/counseling/
Re:solve Crisis Network: 888-796-8226

If the situation is life threatening, call the police:
On campus: CMU Police: 412-268-2323
Off campus: 911