CSCI 466/566 Syllabus

Course Description

Software development in a representative current database. Extensive laboratory work. Prerequisite: CSCI 241 or equivalent.

Introduction

This is a class on databases, with a focus on the relational model, using MySQL as a DBMS. In the latter portion of the class, you will write code to interact with the database using PHP and C++.

You will notice that CSCI 241 or the equivalent is a prerequisite. This is **absolutely necessary**, and if you do not know C/C++ or Java you will likely not succeed in this class. If it has been a while since the last time you programmed in one of these languages, make sure to review.

There will be several PHP assignments and one in C/C++. The section on PHP will be taught by examining the differences between PHP and C/C++. Once again, the prerequisite is not optional, and if you do not have a grasp on the language, you will struggle.

Books

- The Concepts of Database Management, 6th ed., Philip J. Pratt, Joseph J. Adamski Learning PHP 5, David Sklar (Recommended, not required)
- MySQL, 4th ed., Paul Dubois (Recommended, not required)

Attendance

Attendance is mandatory. I will probably not call roll most of the time, but if I notice that people are not showing up, I reserve the right to do so and to penalize all those who are absent without a legitimate excuse. If you do miss class, it is your responsibility to make sure you've caught up.

There will be slides, and they will eventually be posted on Blackboard. They are meant as guidelines, not as a substitute for proper note taking. If I talk about something important in class, you are responsible for knowing it on exams, whether it exists in the slides or not.

Academic Dishonesty/Misconduct

Cheating and academic dishonesty will absolutely not be tolerated. It is acceptable to study in groups, but any work on assignments or exams must be done on your own. It is not acceptable to do your individual programming assignments as a group, or to have someone do the work for you. You should never lend others your work, and never borrow someone else's work. You should never ask for the solutions to an assignment or the answers to a quiz or test from someone else, nor provide them to others. If you have questions as to what is considered acceptable behavior with respect to sharing information, ask the instructor.

If it is found that a student has submitted work that is not their own, all of the parties involved will be punished. The same goes for students caught cheating on quizzes or exams. The punishment will be severe; at the minimum you will face a substantial grade penalty, and the university's Academic Misconduct paperwork will be filed. I guarantee you that cheating is not worth the risk.

Tests and Quizzes

There will be two tests total: a midterm and a final exam. The final exam will be worth twice as much as the midterm. The final exam is cumulative, and will include material from all of the sections in the course. Exams must be taken at the scheduled time and place unless other arrangements have been made with the instructor before the exam time.

Since attendance is mandatory, I reserve the right to have in-class quizzes with no advance notice. The scores from these quizzes will be included in the test and quiz average below. There will be no make-up quizzes. If you are not present during the class the quiz is given, you will not get credit for the quiz.

Assignments

There should be approximately 12 homework assignments due throughout the course. Assignments must be handed in by the deadline specified by the instructor. Late assignments will not be accepted for credit. Again, **NO CREDIT WILL BE AWARDED FOR LATE WORK**.

Grades

The final course grade will come 70% from the average score for quizzes and tests, and 30% from the average score for homework and in-class work:

$$\text{Final Average} = 0.7 * \text{Test Average} + 0.3 * \text{Homework Average}$$

A passing grade of 68% or better must be achieved in both the test average and the homework average in order to pass the class. Letter grades are assigned according to the scale below:

A	[92%-100%]
B	[84%-92%)
C	[76%-84%)
D	[68%-76%)
F	<68%

You should also note that any curve that may be applied to the course grades will be applied evenly across all sections. This means that you're only hurting yourself if you "help" people in other sections.

Additional Requirements for Graduate Students

All graduate students will be required to complete additional work in order to pass the class. The details of this extra work will be provided later, in another document.

Topics Covered

- Introduction to Databases
- Conceptual Modeling with ER Diagrams Relational Database Model
- Relations
- Functional Dependencies Normalization
- Conversion from ER Diagram to Relations
- SQL
- Data Definition Language
- Data Manipulation Language
- SELECT in detail
- HTML
- PHP
- Assorted Other Topics
- Using SQL in C/C++ Programs
- In-Class Group Project

Accessibility

If you have a disability and need an accommodation for this class, please contact the Disability Resource Center as soon as possible. The DRC coordinates accommodations for students with disabilities. It is located on the 4th floor of the Health Services Building, and can be reached at 815-753-1303 (V) or drc@niu.edu. Also, please contact me privately as soon as possible so we can discuss your accommodations. The sooner you let us know your needs, the sooner we can assist you in achieving your learning goals in this course.