
CPSC 440
DATABASE MANAGEMENT SYSTEMS

Instructor: Aaron Koehl
aaron.koehl@cnu.edu

Office Hours: By appointment

Meeting Times Monday and Wednesday 4:00 to 5:15

COURSE DESCRIPTION

This course is intended to develop a broad understanding of modern database design and implementation. We will examine the characteristics and concepts of database systems, which include database management systems, data modeling concepts and processes, normalization, SQL (structured query language), programming, and development and implementation of suitable front-ends.

OBJECTIVES

In this course, you will be exposed to current database concepts with a focus on relational database modeling, to include the development of data models and the implementation of a relational database suited to that data model.

Upon finishing this course, it is expected that you will be able to:

- Converse intelligently about the history and concepts of database systems
 - Understand the complexity and function of modern database management systems
 - Understand when and where to use a database
 - Design a normalized relational data model from business rules
 - To be familiar with issues in designing and developing a database system
 - Write SQL to query data within a relational database
 - Choose an appropriate database management system for a particular task
 - Design and implement a front-end for a database
-

PREREQUISITES

CPSC 270 (Data Structures)

REQUIRED TEXTBOOK

Peter Rob, Carlos Coronel. Database Systems, "Design Implementation and Management," 8th Ed., Thomson Course Technology, 2008.

Complementary materials will be distributed during class when appropriate.

TERM PROJECT

There will be a semester long project and a class presentation at the end of the semester. Based on guidelines to be distributed, the project will be of your own choosing but it should be designed to demonstrate your competence in the coursework material—that is, a successful model and software solution to a business problem employing relational databases.

ASSESSMENT

There will be two tests given throughout the semester as well as a cumulative final and semester project. The grading is broken into the following:

- Assigned Coursework 20%
- Test 1 15% Take-home
- Test 2 15% (Database Concepts, ER Modeling, Normalization)
- Final Exam 20%
- Semester Project 30%

TESTS

Tests will include material covered in class as well as material in the assigned chapter reading (which may not be explicitly covered in class). Tests will be timed, so it is important that the student is versed enough in the skills covered to move quickly through the test. Make-up tests will NOT be given for any reason.

COLLABORATION

ALL FILES SUBMITTED FOR A GRADE MUST BE ENTIRELY YOUR OWN WORK.

HONOR POLICY

"On my honor, I will maintain the highest possible standards of honesty, integrity, and personal responsibility. That means I will not lie, cheat, or steal and as a member of this academic community, I am committed to creating an environment of respect and mutual trust."

DISABILITIES

If you have a disability and need special consideration, please make an appointment with me to discuss those needs. In order to receive an accommodation for your disability, it must be on record in the Office of Career and Counseling Services (594-7192).