CS 550-003 Database Systems
Fall 2022

Course Description
This course covers fundamental knowledge of database management focused on the design, implementation, and use of relational database systems. Students will experience complete database creative process, from database design, to database construction, to database programming. Formal database design theory and normalization will be introduced as well.

Class Time & Location
W 4:30-7:10 PM Music/Theater Building 1007

Textbook
Required:
- Fundamentals of Database System (7th Edition) by Ramez Elmasri and Shamkant B. Navathe

Recommended:
- Oracle 10g Programming: A Primer by Sunderraman
- NoSQL Distilled: A Brief Guide to the Emerging World of Polyglot Persistence by Sadalage and Fowler

Instructor
Dr. Ping Deng
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Office hours: TW 3-4 PM ENGR 4608

Prerequisites
(CS 310 or INFS 519) and CS 330

Disability Accommodations
If you are a student with a disability and you need academic accommodations, please notify me and contact the Office of Disability Services (ODS) at 993-2474, http://ods.gmu.edu. All academic accommodations **must** be arranged through the ODS.

Honor Code Statement
Please be familiar with the GMU Honor Code. In addition, the CS department has its own Honor Code policies. Any deviation from this is

considered an Honor Code violation. All graded work must be your own effort. Any attempts at cheating will not be tolerated, and will be turned in to the Honor Committee with significant penalty recommended. **The usual recommendation is grade F for the course**.

Grading Weights
Quizzes: 15%
Projects: 35%
Midterm: 25%
Final exam: 25%

Grading Policy
- All projects must be submitted on Blackboard.
- You have a budget of 3 late days which you can use for projects. No late work accepted otherwise.
- The lowest quiz score for the semester will be dropped.
- Grades will be changed only when a grading error has been made. All grade change requests are due **within a week** of the grade becoming available on Blackboard. After that week, the window to contest a grade has closed other than recording errors.
- No make-up of exams or quizzes unless **previously** arranged with the instructor.
- **Unexcused absence** from the final exam will result in grade **F** for the course.
- If any extra credit is available, it might be available on specific quiz, exam or assignment, but not as an end-of-semester batch of extra work.

Grading Scale
A^+	>98
A	92-98
A^-	90-92
B^+	88-90
B	82-88
B^-	78-82
C	68-78
F	<68

Tentative Course Outline
Introduction to database concepts
ER & EER model
Relational data model
ER & EER to relational mapping
Relational algebra
SQL
Midterm exam
Database Programming
Functional dependency and normalization
NoSQL
Final exam

Helpful Comments
Welcome to CS 550-003! This class is very interesting and helpful. However, a lot of material will be covered and many new concepts will be introduced. To get the full benefit of the class, I would recommend you to work on the class materials regularly. For example, come to class regularly, participate in group exercises and discussions, review my slides after class, and start working on the assignments as soon as they are available on Blackboard. They often take more time than you estimate. From my experience, time management is essential to the success of this course. Good luck!