COSC 5360 Database Design, Spring 2022

We 6:00 PM - 8:45 PM @ COB 255 or Zoom

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Office Hours: M/W 1:00 PM-2:30 PM or by appointment

General Course Information

Required Texts & Materials	*Fundamentals of Database Systems,* by Ramez Elmasri and Shamkant B. Navathe, 2016 (7th edition). ISBN-13: 978-0133970777. ISBN-10: 0133970779
Required Device	**Computer**. Windows or iOS computer with speaker, a microphone, and Webcams (Note: Webcams are required for remote presentations.) **Reliable Internet Access**.
Pre-requisites	COSC 2315 and COSC 2336 or equivalents.
Course Description	This course introduces the fundamental concepts necessary for database systems and design. It covers relational, hierarchical, and logical database models. Topics include database system architecture, the relational model and algebra, the SQL database language, conceptual data modeling, advanced data modeling concepts, functional dependencies, basic normalization, and concurrent control techniques.
Tentative Course Schedule	

Week	Dates	Lecture Topics	Chapter
1	1/12	1. Overview of Databases and Basic Concepts	1-2
2	1/19	2. Review of Major DB Concepts	2
3	1/26	3. Conceptual Modeling	3
4	2/2	4. ER/EER Model	3-4
5	2/9	5. ER/EER Mapping	9
6	2/16	6. Relational Data Model; Review	5, 8
7	2/23	Midterm Exam	
8	3/2	7. Relational Algebra	8
9	~~3/9~~	Spring Break	
10	3/16	8. SQL	6
11	3/23	9. SQL, cont'd	7
12	3/30	10. Normalization	14
13	4/6	11. Query Processing and Optimization	18-19
14	4/13	12. Concurrent Control Techniques	21-22
15	4/20	Project Demo; Review	
16	4/27	Final Exam	

Grading Policy

Weighting Scheme	Midterm Exam - 20%, Final Exam - 20%, Project - 40%, Homeworks - 10%, Quiz - 10%.	90-100% A 80-89.99% B 70-79.99% C Below 70% F

***This syllabus is subject to change at any time at the discretion of the instructor.**

Projects

- There will be one semester-long project, to be completed in teams.
- In addition to the project, each team will give a final presentation demonstrating their project and database.
- To pass this course, each student must complete all assignments and deliver a functioning team-based product. All code/files required for the projects must be submitted via Canvas. **No late submissions will be accepted.**
- Peer evaluations will be used to keep track of individual performance.
- Team members who do not contribute appropriately to an assignment will receive a significantly lower grade for that assignment than the rest of that team, possibly "zero", at the discretion of the instructor. If there is a lack of appropriate contribution on any two or more assignments, the non-participating student(s) may be recommended to withdraw from the course.

Course Policies

- Assignments should be turned in no later than the deadline. Turn in what is completed by the deadline for partial credit. **No late submissions will be accepted**.
- **Any indication of cheating and/or plagiarism on a(n) assignment/project will be an automatic 0 (zero) for the assignment/project for all students involved. Solutions copied from the internet, instructor's manual, etc. will also be given zero credit.** If you have questions about the line between assistance and cheating, discuss it with the instructor. For examples of Scholastic Dishonesty, please visit Section 8-802 of the Manual of Policy and Procedures.

Attendance and Participation

- Each student is expected to participate by making regular forum posts on the discussion board under Canvas, either asking a question or responding to an existing topic.
- Regular course attendance is mandatory.

Information for Classrooms and Laboratories

- Students are expected to wear face masks covering their noses and mouth in public settings (including classrooms and laboratories). The UT Tyler community of Patriots views adoption of these practices consistent with its Honor Code and a sign of good citizenship and respectful care of fellow classmates, faculty, and staff.
- Students who are feeling ill or experiencing symptoms such as sneezing, coughing, digestive issues (e.g. nausea, diarrhea), or a higher than normal temperature should stay at home and are encouraged to use the UT Tyler COVID-19 Information and Procedures website to review protocols, check symptoms, and report possible exposure. Students needing additional accommodations may contact the Office of Student Accessibility and Resources at University Center 3150, or call (903) 566-7079 or email saroffice@uttyler.edu.

Recording of Class Sessions

- Class sessions may be recorded by the instructor for use by students enrolled in this course. Recordings that contain personally identifiable information or other information subject to FERPA shall not be shared with individuals not enrolled in this course unless appropriate consent is obtained from all relevant students. Class recordings are reserved only for the use of students enrolled in the course and only for educational purposes. Course recordings should not be shared outside of the course in any form without express permission.

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