UT Tyler
THE UNIVERSITY OF TEXAS AT TYLER

SOULES COLLEGE OF BUSINESS

Computer Science Department

COSC 5360 Database Design, Spring 2024

General Course Information

Schedule	MoWe 4:00 PM – 5:20 PM in COB 255
Course Description	This course introduces the fundamental concepts necessary for database systems with an emphasis on relational database concepts, data modeling, database design, development, and implementation. Students will design and construct a database system using database software to implement the conceptual and logical design. 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.
Required Textbook	*Fundamentals of Database Systems*, by Ramez Elmasri and Shamkant B. Navathe, 2016 (7th edition). ISBN-13: 978-0133970777. ISBN-10: 0133970779
Pre-requisites	COSC 2315 and COSC 2336 or equivalents
Instructor	Dr. Yi Li Email: yli@uttyler.edu
Office Hour	MoWe 12:30 PM - 2:00 PM in COB 315.08, or by appointment
Learning Outcomes	1. List and describe the fundamental elements of relational database management systems 2. Explain the basic concepts of relational data model, entity-relationship model, relational database design, relational algebra, and SQL. 3. Analyze database requirements and determine the entities involved in the system and their relationship to one another. 4. Design ER(EER)-models to represent database application scenarios. 5. Develop the logical design of the database by converting the ER(EER)-model to relational tables. 6. Improve the database design by normalization. 7. Create and manipulate database using SQL as both DDL and DML.
Grading Policy	Midterm Exam 25% Final Exam 25% Semester Project 30%

	Assignments	15%
	Exercises/Quizzes	5%
Grading Rubric	Weighted Total 90.0 - 100% 80.0 - 89.99% 70.0 - 79.99% 60.0 - 69.99% Below 60%	Letter Grade A B C D F
Topics	1. Database System Concepts 2. Conceptual Modeling 3. ER/EER Model 4. Relational Data Model 5. ER/EER to Relational Mapping 6. Normalization 7. SQL as DDL 8. SQL as DML 9. Concurrency Control	

Projects

➢ There will be one semester long project, to be completed in teams.

➢ All code and files required for the projects must be submitted via Canvas.

➢ Peer evaluation will be conducted to track each team member's 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 group project assignments, the non-participating student(s) may be recommended to withdraw from the course.

➢ Project 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.**

➢ Details of the project will be covered in lectures, and the specific requirements will be made available on Canvas.

Assignments and Tests:

➢ Assignments will be due before start of class on their due dates. Points will be deducted for late submissions. Any work submitted at any time within the first 24 hours following the submission deadline will receive a penalty of 10% of the maximum number of points available. Any work submitted at any time between 24 hours and up to 48 hours late will receive a deduction of 20% of the points available, and so on, at the rate of an additional 10% of available marks deducted per 24 hours, until the assignment is submitted, or no points remain. Weekend days will be counted.

➤ Tests must be taken when scheduled. Make-up exams will be granted at the discretion of the instructor. Make-ups will be given only under extremely unusual circumstances, will be different from exams given during the regular class time and may be discounted by up to 50% of the grade. Permission for a makeup exam must be obtained PRIOR to the regular exam and must include written documentation of the student's absence.

Exercises and Quizzes:

➤ Exercises/quizzes will be given at the end of each course module. Students need to complete and submit exercises/quizzes in class.

Attendance and Participation:

➤ Attendance and participation will be considered in a portion of the student's grade.
➤ 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. If attendance is low, the instructor reserves the right to administer pop quizzes for credit, to be determined

Important Dates:

Date	Day	Description
1/16	Tuesday	Courses Begin
1/29	Monday	Census Date
3/11-3/15		Spring Break
3/25	Monday	Last day to withdraw
4/29-5/3		Final Exam Week

Plagiarism:

Unless otherwise specified, all work submitted for a grade must be completed by yourself. You are not to submit another person's work and claim it as your own. Plagiarism will result in disciplinary actions. To spare yourself accusations of plagiarism

1. Do not show another student a copy of your work before it has been graded. The penalties for permitting your work to be copied are the same as the penalties for copying someone else's work.
2. Do not leave printouts of your work where other students may pick them up.

Any indication of cheating and/or plagiarism on an exam/assignment/project will be an automatic 0 (zero) for the exam/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.

Student Resources:
Resources to assist you in your courses

- [UT Tyler Student Accessibility and Resource (SAR) Office](#) (provides needed accommodations to students with document needs related to access and learning)
- [UT Tyler Writing Center](#)
- [The Mathematics Learning Center](#)
- [UT Tyler PASS Tutoring Center](#)
- [UT Tyler Supplemental Instruction](#)
- [Upswing (24/7 online tutoring) - covers nearly all undergraduate course areas](#)
- [Robert Muntz Library](#) and [Library Liaison](#)
- [Canvas 101](#) (learn to use Canvas, proctoring, Unicheck, and other software)
- Digital Support Toolkit (for supported courses only. Students are automatically enrolled in the toolkit for supported courses)
- LIB 422 -- Computer Lab where students can take a proctored exam
- [The Career Success Center](#)
- [UT Tyler Testing Center](#)
- [Office of Research & Scholarship Design and Data Analysis Lab](#)

Resources available to UT Tyler Students

- [UT Tyler Counseling Center](#) (available to all students)
- [TAO Online Support Center](#) (online self-help modules related to mental & emotional health)
- [Military and Veterans Success Center](#) (supports for all of our military affiliated students)
- [UT Tyler Patriot Food Pantry](#)
- [UT Tyler Financial Aid and Scholarships](#)
- [UT Tyler Registrar's Office](#)
- [Office of International Programs](#)
- [Title IX Reporting](#)
- [Patriots Engage](#) (available to all students. Get engaged at UT Tyler.)

University Policies and Information

- **Withdrawing from Class** - Students you are allowed to [withdraw](#) (drop) from this course through the University's [Withdrawal Portal](#). Texas law prohibits students who began college for the first time in Fall 2007 or thereafter from dropping more than six courses during their entire undergraduate career. This includes courses dropped at other 2-year or 4-year Texas public colleges and universities. Make sure to consider the impact withdrawing from this class has on your academic progress as well as the financial implications. We encourage you to consult your advisor(s) and financial aid for

additional guidance. CAUTION #1: Withdrawing before census day does not mean you get a full refund. Please see the [Tuition and Fee Refund Schedule](). CAUTION #2: All international students must check with the [Office of International Programs]() before withdrawing. All international students are required to enroll full-time for fall and spring terms.

- **Final Exam Policy**: Final examinations are administered as scheduled. If unusual circumstances require that special arrangements be made for an individual student or class, the dean of the appropriate college, after consultation with the faculty member involved, may authorize an exception to the schedule. Faculty members are required to maintain student final examination papers for a minimum of three months following the examination date.

- **Incomplete Grade Policy**: If a student, because of extenuating circumstances, is unable to complete all of the requirements for a course by the end of the semester, then the instructor may recommend an Incomplete (I) for the course. The "I" may be assigned in lieu of a grade only when all of the following conditions are met: (a) the student has been making satisfactory progress in the course; (b) the student is unable to complete all course work or final exam due to unusual circumstances that are beyond personal control and are acceptable to the instructor; and (c) the student presents these reasons prior to the time that the final grade roster is due. The semester credit hours for an Incomplete will not be used to calculate the grade point average for a student.
The student and the instructor must submit an Incomplete Form detailing the work required and the time by which the work must be completed to their respective department chair or college dean for approval. The time limit established must not exceed one year. Should the student fail to complete all of the work for the course within the time limit, then the instructor may assign zeros to the unfinished work, compute the course average for the student, and assign the appropriate grade. If a grade has not been assigned within one year, then the Incomplete will be changed to an F, or to NC if the course was originally taken under the CR/NC grading basis.

- **Grade Appeal Policy:** - UT Tyler's Grade Appeal policy requires the completion of a Grade Appeal form for this action to take place. The grade appeal begins with the instructor of your course. If you do not agree with the decision of the instructor, you may then move your appeal to the department chair/school director for that course. If you are still dissatisfied with the decision of the chair/director, you may move the appeal to the Dean of the College offering that course who has the final decision. Grade appeals must be initiated within sixty (60) days from the date of receiving the final course grade. The Grade Appeal form is found on the [Registrar's Form Library.]()

- **Disability/Accessibility Services**: The University of Texas at Tyler has a continuing commitment to providing reasonable accommodations for students with documented disabilities. Students with disabilities who may need accommodation(s) in order to fully participate in this class are urged to contact the Student Accessibility and Resources Office (SAR) as soon as possible to explore what arrangements need to be made to ensure access. If you have a disability, you are encouraged to visit the [SAR Portal]() ([https://hood.accessiblelearning.com/UTTyler/]()) and complete the New Student Application. For more information, please visit the [SAR wepage]() or call 903.566.7079.

- **Military Affiliated Students**: UT Tyler honors the service and sacrifices of our military affiliated students. If you are a student who is a veteran, on active duty, in the reserves or National Guard, or a military spouse or dependent, please stay in contact with me if any aspect of your present or prior service or family situation makes it difficult for you to fulfill the requirements of a course or creates disruption in your academic progress. It is important to make me aware of any complications as far in advance as possible. I am willing to work with you and, if needed, put you in contact with university staff who are trained to assist you. Campus resources for military affiliated students are in the [Military and Veterans Success Center (MVSC)](). The MVSC can be reached at MVSC@uttyler.edu, or via phone at 903.565.5972.
- **Academic Honesty and Academic Misconduct:** The UT Tyler community comes together to pledge that "Honor and integrity will not allow me to lie, cheat, or steal, nor to accept the actions of those who do." Therefore, we enforce the [Student Conduct and Discipline policy]() in the Student Manual Of Operating Procedures (Section 8).
- **FERPA** - UT Tyler follows the Family Educational Rights and Privacy Act (FERPA) as noted in [University Policy 5.2.3](). The course instructor will follow all requirements in protecting your confidential information.
- **COVID Guidance**
  - *Information for Classrooms and Laboratories:* Students are required to wear face masks covering their nose and mouth, and follow social distancing guidelines, at all times in public settings (including classrooms and laboratories), as specified by [Procedures for Fall 2020 Return to Normal Operations](). 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, or a higher than normal temperature will be excused from class and should stay at home and may join the class remotely. Students who have difficulty adhering to the Covid-19 safety policies for health reasons are also encouraged to join the class remotely. 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.

- **Absence for Official University Events or Activities**: This course follows the practices related to approved absences as noted by the Student Manual of Operating Procedures (Sec. 1 -501).
- **Absence for Religious Holidays:** Students who anticipate being absent from class due to a religious holiday are requested to inform the instructor by the second class meeting of the semester.
- **Campus Carry:** We respect the right and privacy of students who are duly licensed to carry concealed weapons in this class. License holders are expected to behave responsibly and keep a handgun secure and concealed. More information is available at http://www.uttyler.edu/about/campus-carry/index.php.