

CSCE 4350.001 – Fundamentals of Database Systems (Fall 2026)

Instructor : Dr. JungHwan Oh,
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Office Hours : Friday 01:30 - 03:30 pm in-person or via live Zoom session (my Zoom id is 731-188-6265).
Text : Database System Concepts. Seventh Edition, by A. Silberschatz, H. E. Korth, and S. Sudarshan.
The class materials (lecture slides and others) are on Canvas.

Pre-Requisites : CSCE 2100 and CSCE 2110 (or equivalent). Each with a grade of C or better. Students must:
- Be familiar with data structure concepts and algorithms (such as trees, sorting, hashing, ...)
- Be familiar with at least one high-level programming language.

Students without adequate preparation are at substantial risk of failing this course.

Class time and Room: Fr 10:40 am - 01:30 pm, NTDP E264

Contents : This course will cover the following topics.

- Introduction to the Relational Model
- Introduction to SQL
- Intermediate SQL
- Database Design using the E-R model
- Relational Database Design
- Indexing
- Physical Storage Systems
- Data Storage Structures

Description : Logical and physical database system organization; logical models; design issues; secondary storage considerations.

Objectives: Analyze a problem to determine its data requirements, Create a database that satisfies the given data requirements, Store, maintain and access data in a database using SQL, Understand and demonstrate how B+-tree and hashing speed data access, Understand and use the theory of functional dependencies for DB design.

Grading :

Exam 1	20 %	Project Phase 1:	5%
Exam 2	22 %	Project Phase 2:	6%
Assignments	12 %	Project Phase 3:	17%
Attendance	10 %	Project Presentation and its submission	08 %

Final grades will be assigned according to the following scale:

A (score ≥ 90), B ($90 > \text{score} \geq 80$), C ($80 > \text{score} \geq 70$), D ($70 > \text{score} \geq 60$), F (otherwise).

Exams: Exam 1 and Exam 2 will be from the lecture slides and the assignments. Exam 1 will cover the parts in the previous weeks. Exam 2 will not be cumulative, and it will cover the materials after Exam 1 covers. Both exams will include essay questions (4, 5 or 6 questions) asking to explain, describe, and/or compute some technical and theoretical issues. Also, they can be either descriptive or problematic questions. There is no true/false, multiple choice, ordering, or matching questions at all. Both exams will be closed-book tests and conducted in-person in the class. A plain calculator without storage or network connection can be used. Exam 1 will be conducted in class from 11:30 am to 01:20 pm on Oct. 09. Exam 2 will be conducted in class from 10:30 am to 12:30 pm on Dec. 05 (Saturday).
<https://registrar.unt.edu/exams/final-exam-schedule/fall.html>

Assignments: There will be some assignments. **Late submission may be accepted with significant grading deduction.** The details can be found in Canvas.

Project: There will be a course project involving the design, implementation, population, and querying of a small database, using a relational database management system. The project is an important part of this course. There will be progress reports due during the term and a final report at the end of the term. Finally, there will a presentation for each project in the class through Zoom. **Late submission may be accepted with grading deduction.** The details can be found in Canvas.

Attendance: Attending in person only will be considered as attendance which will be taken each and every class day. No On-line classes at all except the term-project presentations. The attendance for all students (presenters and non-presenters) will be checked during presentations. Students should attend every class unless there is a university excused absence such as active military service, or an official university function as stated in the Student Attendance and Authorized Absences Policy (PDF) (<https://policy.unt.edu/policy/06-039>). If students cannot attend a class due to an emergency, please let the instructor know.

Policies

- Students taking this course implicitly agree to uphold the UNT honor code:
“I commit myself to honor, integrity, and responsibility as a student representing the University of North Texas community. I understand and pledge to uphold academic integrity as set forth by UNT Student Academic Integrity Policy, 06.003 (<https://policy.unt.edu/policy/06-003>). I affirm that the work I submit will always be my own, and the support I provide and receive will always be honorable.” It is highly important that you are familiar with the University’s academic integrity policy and the CSE department’s guidelines on academic integrity:
UNT Academic Integrity Policy (PDF) (<https://policy.unt.edu/policy/06-003>)
CSE Academic Integrity Guidelines: <https://engineering.unt.edu/cse/students/resources/academic-integrity.html>
- Students are expected to do their own work on the assignments. Everyone is encouraged to discuss the assignments. However, any work/code turned in must be your own.
- In this course, I want you to engage deeply with the materials and develop your own critical thinking and writing skills. For this reason, the use of Generative AI (GenAI) tools like [Claude, ChatGPT, and/or Gemini, etc. is not permitted. While these tools can be helpful in some contexts, they do not align with our goal of fostering the development of your independent thinking. Using GenAI to complete any part of an assignment, exam, or coursework will be considered a violation of academic integrity, as it prevents the development of your own skills, and will be addressed according to the Student Academic Integrity policy (<https://policy.unt.edu/policy/06-003>).
- No make-up exams (before or after) will be given, and No incomplete grade will be given generally. Equitable arrangements will be made for those with a university-approved excuse. No early or late exams.
- Do not be late to class. If you arrive late, please enter quietly and sit down. Do not disrupt the class. Do not leave class early unless you have a permission before the class starts. We will all treat each other with courtesy and respect.
- Every student in this class should have the right to learn and engage within an environment of respect and courtesy from others. We will discuss our classroom’s habits of engagement, and I also encourage you to review UNT’s student code of conduct so that we can all start with the same baseline civility understanding (Code of Student Conduct) (<https://policy.unt.edu/policy/07-012>).
- The course evaluation (SOPT) is a requirement for all organized classes at UNT. This short survey will be made available to you at the end of the semester, providing you a chance to comment on how this class is taught. This is an important part of your participation in this class.
- No communication through a non-UNT email account. If such an email is received, the student should be asked to use their UNT account and resend. When you send any email, send it to both TA and Instructor, and the subject must include CSCE4350. If not, it may be discarded. You need to regularly check your email. During busy times, my inbox becomes rather full, so if you contact me and do not receive a response within two business days, please send a follow up email. A gentle nudge is always appreciated.
- Students will be notified by Eagle Alert if there is a campus closing that will impact a class and describe that the calendar is subject to change, citing the Campus Closures Policy (<https://policy.unt.edu/policy/15-006>).
- This course has digital components. To fully participate in this class, students will need internet access to reference content on the Canvas Learning Management System and [faculty member to include other required equipment or software such as a webcam, microphone, Adobe Photoshop, etc.]. If circumstances change, you will be informed of other technical needs to access course content. Information on how to be successful in a digital learning environment can be found at Learn Anywhere (<https://online.unt.edu/learn>).
- Disabilities Accommodation: The University of North Texas makes reasonable accommodations for students with disabilities. To request accommodations, you must first register with the Office of Disability Access (ODA) by completing an application for services and providing documentation to verify your eligibility each semester. Once your eligibility is confirmed, you may request your letter of accommodation. ODA will then email your faculty a letter of reasonable accommodation, initiating a private discussion about your specific needs in the course. You can request accommodations at any time, but it’s important to provide ODA notice to your faculty as early as possible in the semester to avoid delays in implementation. Keep in mind that you must obtain a new letter of accommodation for each semester and meet with each faculty member before accommodations can be implemented in each class. You are strongly encouraged to meet with faculty regarding your accommodations during office hours or by appointment. Faculty have the authority to ask you to discuss your letter during their designated office hours to protect your privacy. For more information and to access resources that can support your needs, refer to the Office of Disability Access website (<https://studentaffairs.unt.edu/office-disability-access>).
- I reserve the right to modify course policies, the course calendar, assignment or project point values, and due dates.
- **Extra Help: PLEASE DO NOT WAIT UNTIL THE LAST MINUTE. If you are having trouble with this class, please contact me during office hours, or you can email.**