

# CSCE 4350: Fundamentals of Database Systems

Section 400, 100% Online

## COURSE SYLLABUS, Summer 2026

Department of Computer Science and Engineering

University of North Texas

### Instructor

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**Office:** Discovery Park E250G

**Office Hours:** By Zoom <https://unt.zoom.us/j/9876304928> and by appointment. **Please confirm your appointment by email.**

Office hours are for Summer 2026 only from May 18 to July 22, 2026.

### Teaching Assistants: (Check on Canvas)

Name	Email	Office Hours
Aashish Pandey	<a href="mailto:Aashishpandey2@my.unt.edu">Aashishpandey2@my.unt.edu</a>	Check Canvas for hours and contact information

**Communication Expectations:** Since this is an online class, participation in weekly online activities is considered as attending the course. Additionally, you are expected to check Canvas content, due dates and assignments at least at three different days during each week of the course. You will be expected to regularly check university email. For quick questions, email is preferred, and you can expect a response within 48 hours during the work week (M-F 9am-4:30pm, no Saturday, no Sunday). When you send emails, please use CSCE 4350 as part of your subject. Please do not expect a response over the weekend. Feedback on assignments, exams, and grades will usually be posted within two weeks after the due date.

For a grading issue, do not post your question as a comment after we have graded an assignment because we do not see those comments unless we revisit every graded assignment. Please email your grading issue questions.

### AI Resources:

The use of AI resources such Google or ChatGPT is prohibited during exams or wherever indicated in specific assignments. Otherwise, it is permitted for educational purposes and enrichment.

### Syllabus Revisions:

This syllabus may be modified as the course progresses should the instructor deem it necessary. Notice of changes to the syllabus shall be made through Canvas and/or in-class announcements.

### Welcome to UNT (University of North Texas)!

As members of the UNT community, we have all made a commitment to being part of an institution that respects and values the identities of the students and employees with

whom we interact. UNT does not tolerate identity-based discrimination, harassment, and retaliation. UNT's full Non-Discrimination Policy can be found in the UNT Policies section of the syllabus.

### Course Description:

This course presents the main aspects of relational databases such as database design, query languages and normalization. It includes an overview of Relational Algebra and SQL, and the Oracle or MySQL database management systems. Students will consider several aspects involved in the design of databases such as avoiding data redundancy, security, data consistency and integrity. Students will have several hands-on activities with the Oracle or MySQL systems in which they will create databases, execute queries, check integrity constraints, and write procedures, functions, triggers and programs.

### Course Structure

This course takes place 100% online. We may have several synchronous video conferences with links posted throughout the semester if needed. Other than that, your interaction with me and with your fellow students will take place on Canvas. There are 10 weeks of content that you will move through. I will open a new module of 1 or 2 weeks each. Participation in video conferences, if there is any, is optional. This course is not self-paced but self-directed and requires students to read the textbook, other course resources posted on canvas and practice the material independently. You must complete in sequential order ALL activities and assignments listed in each of the modules and take three exams to successfully finish this course.

### Course Prerequisites

Prerequisite(s): Programming Experience and Data Structures.

### Course Objectives

Course outcomes are measurable achievements accomplished by completing a course. This course has 12 Course Learning Objectives:

Students will be able to:

1. Describe the fundamental concepts of relational databases such as database system, database management system, database architecture, data independence, database languages and the roles of people involved in database systems.
2. Demonstrate an understanding of the relational data model.
3. Analyze database requirements and determine the entities involved in the system and their relationship to one another.
4. Develop the logical design of the database using data modeling concepts such as entity-relationship diagrams.
5. Transform an information model into a relational database schema such as converting entity-relationship diagrams into relational tables.
6. Formulate, using relational algebra, solutions to a broad range of query problems.
7. Formulate, using SQL, solutions to a broad range of queries and data update problems.
8. Manipulate a database using SQL.

9. Utilize a wide range of features available in a Database Management System package such as Oracle or MySQL.
10. Use a database management system such as ORACLE or MySQL to create, populate, constraint, update, insert and query a relational database.
11. Design programming code to create stored procedures, stored functions, triggers and packages that manipulate a relational database.
12. Improve the database design by normalization.

## Main Course topics

Relational Model, Database Design, Relational Algebra, Query Processing, and Procedural Language in SQL

## Required Texts

### Required Textbook:

We have two required textbooks.

- Our first required textbook is a hardcover textbook.  
Database Management Systems, Ramakrishnan, ISBN 0072465638
- Our second required textbook is an electronic book  
ZyBooks: CSCE 4350: Fundamentals of Database Systems
  1. Click any zyBooks assignment link from Canvas (Do not go to the zyBooks website and create a new account)
  2. SubscribeThe subscription is \$94. Students may begin subscribing from May 04, 2026, and the cutoff to subscribe is Jul 19, 2026. Subscriptions will last until Aug 07, 2026.

## Technical Requirements and Skills

### Minimum Technology Requirements

- Computers are **required for this class**
  - **You must have access to a computer system with access to the Internet and capable of installing software and running Lockdown Browser. Chromebooks are not appropriate for an online class because you can't perform software installations.**
  - Quizzes and exams use the Canvas quiz system
    - [Canvas Technical Requirements \(https://clear.unt.edu/supported-technologies/canvas/requirements\)](https://clear.unt.edu/supported-technologies/canvas/requirements)
  - Students will be expected to download software as needed and indicated in class. You must download software and perform installations as needed.

## Technical Assistance

Part of working in the online environment involves dealing with the inconveniences and frustration that can arise when technology breaks down or does not perform as expected. Here at UNT we have a Student Help Desk that you can contact for help with Canvas or other technology issues.

## Rules of Engagement

Rules of engagement refer to the way students are expected to interact with each other and with their instructors. Here are some general guidelines:

- While the freedom to express yourself is a fundamental human right, any communication that utilizes cruel and derogatory language on the basis of race, color, national origin, religion, sex, sexual orientation, gender identity, gender expression, age, disability, genetic information, veteran status, or any other characteristic protected under applicable federal, or state law will not be tolerated.
- Treat your instructor and classmates with respect in any communication online or face-to-face, even when their opinion differs from your own.
- Ask for and use the correct name and pronouns for your instructor and classmates.
- Speak from individual experiences. Use “I” statements to share thoughts and feelings. Try not to speak on behalf of groups or other individuals’ experiences.
- Use your critical thinking skills to challenge other people’s ideas, instead of attacking individuals.
- Avoid using all caps while communicating digitally. This may be interpreted as “YELLING!”
- Be cautious when using humor or sarcasm in emails or discussion posts as tone can be difficult to interpret digitally.
- Avoid using “text-talk” unless explicitly permitted by your instructor.
- Proofread and fact-check your sources.
- Keep in mind that online posts can be permanent, so think first before you type.

See these [Engagement Guidelines](https://clear.unt.edu/online-communication-tips) (https://clear.unt.edu/online-communication-tips) for more information.

## Course Requirements

Your course grade will be determined by a combination of the following:

- ZyBook Activities: 11%
- Weekly Posting Activities and Quizzes (online discussions): 22%
- Quizzes: 13%
- Project: 12 %
- Exams: 42%
  - Exam 1: 13 %
  - Exam 2: 13 %
  - Exam 3: 16 %

Total 100%

## Grading

A: 90-100% (Outstanding, excellent work. The student performs well above the minimum criteria.)

B: 80-89% (Good, impressive work. The student performs above the minimum criteria.)

C: 70-79% (Solid, college-level work. The student meets the criteria of the assignment.)  
D: 60-69% (Below average work. The student fails to meet the minimum criteria.)  
F: 59% and below (Sub-par work. The student fails to complete the assignment.)

**Grading Scale:** A=90, B=80-89.9, C=70-79.9, D=60-69.9, F=0-59.9 %.

### Course Evaluation

Student Perceptions of Teaching (SPOT) is the student evaluation system for UNT and allows students the ability to confidentially provide constructive feedback to their instructor and department to improve the quality of student experiences in the course.

### Course Policies

#### Assignment Policy and Content Responsibility

There will be no make-up work for any graded course work activity in this course after their respective emergency extension. There are several course assignments such as quizzes, zyBooks readings, exams, weekly postings, and a group project. You need to solve the problems given and submit your answers by preferably days before their due date. However, most but not all course assignments have a 2-day emergency penalty free extension labeled as "Available Until" in Canvas. The emergency time extension should be used only to complete an assignment submission and NOT used to just start working on the assignment. There are no further extensions after the emergency extension. **WE DO NOT ACCEPT ASSIGNMENTS SUBMISSIONS BY EMAIL.** See the UNT Attendance Policy for more information. Please do not just start working on work course assignments after their due date and minutes before the emergency extension is about to expire. Getting sick the day the emergency extension expires without having done any prior work will not give you any further extension.

#### Examination Policy

Exams will be on the computer using the Canvas quiz system. Exam days are posted and are considered fixed. Missed exams: Exams cannot be missed without prior arrangements or later documented proof of extenuating circumstances. We do not have make up exams. Time will be limited, and all work will be individual. Exams will focus on the most recent material but are expected to be cumulative in scope.

#### Late Work

No late submission is accepted. All work turned in after the deadline will receive a grade of zero.

#### Project

There is a term group project in which you will implement a relational database system. No late submission will be accepted.

#### Extra Credit Options

Extra credit is optional. Be aware that we might not have any extra credit activity during this course. You do not have to participate in them to get an A in the course. These not-mandatory activities cannot be substituted or made-up. Extra credit activities would be special assignments with different point values. They are optional and they will be

averaged separately from regular assignments. The final grade listed on Canvas will not include the extra credit. The final average extra credit percentage will be multiplied by 2.5 points, and those points will be considered only for determining the final letter grade. For example, if at the end of the course, a student has a 68% final score on Canvas for regular assignments, and such student has 100% in extra credit assignments. Then, to determine the student's final letter grade, we will do  $68\% + 100\% * 2.5 = 70.5\%$ . The extra credit would change that student's grade from D to C. However, another student with a final score on Canvas for regular assignments of 74% with an extra credit average of 100%, will not change the student grade of C to a B because  $74\% + 100\% * 2.5 = 76.5\%$  which is still a C. In conclusion, extra credit is optional, you must qualify to validate your extra credit, additionally, extra credit only helps those students with borderline letter grade limits since the maximum points added to your final score is 2.5 points. Further, letter grades are not reflected on Canvas. Letter grades are posted on my.unt.edu.

The Final grade on Canvas will not ever be modified by the Extra Credit. Your 2.5 points max extra credit will be considered only to move you from one letter grade to a higher letter grade if your final grade posted on Canvas is within 2.5 points of the next letter grade. Therefore, if your final grade is, for example, 79.95 on Canvas, then you need some extra credit to move your grade from C to B.

To qualify for extra credit, you should not have incurred any of the penalties indicated in the next section.

#### Weekly Posting Activities (online-discussions)

Discussion assignments are weekly activities that track attendance/participation to the online course. Students just need to follow a series of one or more "how-to" style videos to post their answers. They are very brief "in-class like activities," and answers are provided in one or more series of videos (not homework style, not research). They will be due on Fridays but with a penalty-free emergency extension to Mondays. Most students get 100% credit on them. It is suggested to post answers by Thursday so that students have enough time to reply/comment to other's posts.

#### Attendance Policy

Since this is an online class, participation in weekly online activities is considered as attending the course. Additionally, you are expected to check Canvas content, due dates and assignments at least three different days during each week of the course.

If you are not attending the online course, you will be expected to know and understand the requisite topics and concepts. Since this is an online class, you are expected to be active or "present" by participating at least in the weekly online discussions and you are expected to check on the weekly Canvas content and activities at least at three different days each week of the course. You are responsible for checking announcements often to stay connected with the whole class about upcoming events, assignments, or activities. Also check out your Canvas for assignment due dates so you can plan your semester accordingly. There is no need to let the instructor know you have missed a class (weekly online discussion), or you will miss future classes; however, you are responsible for

keeping up with the material covered in the class if you are not active. We do not have excused abscess or permission to be absent. If a class is missed, you are expected to proactively reach out to classmates, the TA, or the instructor if there are any questions. Again, if you miss a class (weekly online participation and being active on Canvas at least at three different days during the week), you are still responsible for knowing everything that took place. Your absence does not change the due date of an assignment.

### Grading Issues

Once a grade has been posted for a course assignment, grading issues need to be addressed with graders first. Do not contact the instructor unless the grading issue is not solved by graders. Additionally, we only have one week after a grade has been posted to address grading errors or any other issues. We cannot correct grades that have been posted on canvas for longer than one week.

### Academic Integrity Policy

Cheating of any sort will not be tolerated in this course. All work turned in with your name on it must be your own work. Failure to adhere to these strict standards will cause disciplinary action that could be as severe as expulsion from the university. If it is determined a student cheated on any assignment in this course, they will receive an F for their final course grade and an academic integrity report will be filed with the Office of Academic Integrity. Further, UNT is now maintaining a database recording any acts of academic dishonesty available to employers. For more information see the UNT Student Academic Integrity Policy.

### Course Penalties

Incurring any of the following penalties disqualifies you to receive any extra credit if available, and penalizes your grades as indicated next.

1. ***Cheating:*** Cheating on tests and programs will be dealt with very severely. You must make a diligent effort to prevent other students from seeing your test answers. If you take an exam in proximity with another classmate, keep your paper or computer screen covered and do not let your eyes wander during tests. You should not receive or give help to others while taking an exam. We also monitor responses to course assignments generated by AI resources such as ChatGPT.

***First offense of Receiving or giving help while taking an exam=*** -25% deducted from grade

***Second offense of Receiving or giving help while taking an exam=*** 0% in the exam. The exam will not be graded.

**One or more incidents of cheating in exam= 0% in Exam**

**Cheating on a second exam= F in the course**

2. ***Plagiarism:*** Plagiarism is a form of cheating. Copying someone else's program, changing a few lines, and turning it in as your own is plagiarism; thus, this is cheating. Each student writes his or her own programs. You should not receive or give help to others on any program that goes beyond help in deciphering syntax errors. **First time penalty = 0% in assignment, second time penalty=F in the course.**

- Inappropriate multiple requests of changing a grade for any of the following statements or something similar: (1) Being in probation, (2) last semester, (3) core course, (4) financial situation, (5) Being sick, (6) suspended from the university, (7) family issues, (8) others.

## Course Calendar

### CSCE 4350: Summer 2026

All Module i Assignments are due on Mi, but Exams are due on Ei

All Module i Assignments have universal extensions until Mi-ext (from 24 to 72 hours), but Exams have extensions until E1-ext (up to 24 hours).

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
5/17/2026	5/18/2026	5/19/2026	5/20/2026	5/21/2026	5/22/2026 M1	5/23/2026
5/24/2026	5/25/2026 Memorial Day	5/26/2026 M1-ext	5/27/2026	5/28/2026	5/29/2026 M2	5/30/2026
5/31/2026	6/1/2026 M2-ext	6/2/2026	6/3/2026	6/4/2026	6/5/2026 M3	6/6/2026
6/7/2026	6/8/2026 M3-ext	6/9/2026	6/10/2026 E1	6/11/2026 E1-ext	6/12/2026 M4	6/13/2026
6/14/2026	6/15/2026 M4-ext	6/16/2026	6/17/2026	6/18/2026	6/19/2026 Juneteenth	6/20/2026 M5
6/21/2026	6/22/2026	6/23/2026 M5-ext	6/24/2026	6/25/2026	6/26/2026 M6	6/27/2026
6/28/2026	6/29/2026 M6-ext	6/30/2026	7/1/2026 E2	7/2/2026 E2-ext	7/3/2026 Independence Day	7/4/2026 M7
7/5/2026	7/6/2026	7/7/2026 M7-ext	7/8/2026	7/9/2026	7/10/2026 M8	7/11/2026
7/12/2026	7/13/2026 M8-ext	7/14/2026	7/15/2026	7/16/2026	7/17/2026 M9	7/18/2026
7/19/2026	7/20/2026 M9-ext	7/21/2026 M10	7/22/2026 E3	7/23/2026 M10-ext and E3-ext	7/24/2026	7/25/2026

Universal extensions are penalty free, and they are intended for emergency only and/or any other accommodation. Students can use them as needed without contacting the instructor.

There will be no other extensions.