

Course Syllabus

CSCE 4350 / Fundamentals of Database Systems

Instructor Contact

Name: Dr. Jacob Hochstetler

Office Location: VIA ZOOM THIS SEMESTER

Office Hours: Tuesdays 3:00-4:00 p.m. (please email before to let me know you will be in the Zoom meeting)

Email: Jacob.Hochstetler@unt.edu (<mailto:Jacob.Hochstetler@unt.edu>)

Grader: [Haiyi Wang](mailto:HaiyiWang@my.unt.edu) (<mailto:HaiyiWang@my.unt.edu>) (HaiyiWang@my.unt.edu) Office hours Fridays 10-11 a.m.

Communication Expectations

Please send all communication as email via your official student UNT email (my.unt.edu).

Just like you, I get a ton of spam to my email address, and if it has *[EXT]* in the subject line, there's a ~95% chance I'm just deleting it. Additionally, I cannot discuss any student issues through external email due to FERPA, .e.g how do I *know* it's you I'm conversing with.

I have a 48 hour reply policy on all emails, excepting weekends and holidays.

Please come to me with any issues. An email is free and if I can't resolve it, we can move the issue up the chain.

All grades will be posted promptly after grading has been completed.

In your emails please include:

- **Subject line:** the course (e.g. CSCE 4350) that you are emailing about and a few words (aka, *the Subject*)
- **Body:** a signature with your email with your name and UNT ID number.

This helps me not only help you, but if there are multiple issues with the course (i.e. a module is broken for instance), I can quickly collate the issue.

Course Description

This course covers topics including logical and physical database system organization, logical models, design issues, and secondary storage considerations. Students develop and practice skills through the use of projects and real-world database creation. This course is online and instruction and assignment submission will occur online through Canvas.

Course Structure

This is an online course with a weekly module structure. Each week will have a reading / video / assignment to complete and most weeks will have a quiz, homework or exam.

Course Prerequisites or Other Restrictions

CSCE 2110 is an enforced pre-requisite.

Course Objectives

By the end of this course, students will be able to:

1. Analyze a problem to determine its data requirements.
2. Create a database that satisfies the given data requirements.
3. Create, maintain and access data in a database using SQL.
4. Describe and demonstrate how B+-tree and hashing speed data access.
5. Describe and implement the theory of functional dependencies for Database design.

Materials

There is no text required for the course – all resources are online

Technical Requirements & Skills

Minimum Technology Requirements

- A computer with Internet access
- **[Canvas Technical Requirements \(https://clear.unt.edu/supported-technologies/canvas/requirements\)](https://clear.unt.edu/supported-technologies/canvas/requirements)**

Netiquette

Netiquette, or online etiquette, refers to the way students are expected to interact with each other and with their instructors online. Here are some general guidelines:

- Treat your instructor and classmates with respect in email or any other communication.

- Remember that all college level communication should have correct spelling and grammar (this includes discussion boards).
- Avoid slang terms such as “totes magotes” and texting abbreviations such as “u” instead of “you.”
- Humor and sarcasm are highly encouraged. People who take the world seriously are in for a rough journey.
- Don’t lead your emails off with your social security and bank account numbers, password manager master password, home address, credit score, and dental record jpegs. 3 of those will suffice.

See these [Netiquette Guidelines \(https://clear.unt.edu/online-communication-tips\)](https://clear.unt.edu/online-communication-tips) (Links to an external site.) for more information.

Success in an Online Course

The key to success in the course is to keep up with the material and work a week or so ahead, so that you have a buffer if any unexpected situations come up with work, illness and so on.

[How to Succeed as an Online Student \(https://clear.unt.edu/teaching-resources/online-teaching/succeed-online\)](https://clear.unt.edu/teaching-resources/online-teaching/succeed-online)

Getting Help

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.

[UNT Help Desk \(Links to an external site.\) \(https://it.unt.edu/helpdesk\)](https://it.unt.edu/helpdesk)

Call: [940-565-2324 \(tel:940-565-2324\)](tel:940-565-2324)

[\(tel:940-565-2324\)](tel:940-565-2324) **Email:** [helpdesk@unt.edu \(mailto:helpdesk@unt.edu\)](mailto:helpdesk@unt.edu)

Walk-in: Sage Hall, Room 330

Walk-in Hours: Monday–Friday: 8am - 5pm

Telephone Availability:

- **Spring Hours**
 - Monday–Thursday: 8am – 9pm
 - Friday: 8am- 5pm
 - Saturday: 11am- 3pm

For additional support, visit [Canvas Technical Help \(https://community.canvaslms.com/docs/DOC-10554-4212710328\)](https://community.canvaslms.com/docs/DOC-10554-4212710328)

Laptop Checkouts [_ \(https://library.unt.edu/services/laptop-checkout/\)](https://library.unt.edu/services/laptop-checkout/)

The following library service desks provide laptop checkouts during **hours of operation** [\(https://calendar.library.unt.edu/hours/\)](https://calendar.library.unt.edu/hours/). MacBooks are only available at Willis Library.

- **Willis Library: The Spark** [_ \(https://guides.library.unt.edu/spark/\)](https://guides.library.unt.edu/spark/), First Floor
- **Sycamore Library: Sycamore Service Desk** [_ \(https://library.unt.edu/sycamore/service-desk/\)](https://library.unt.edu/sycamore/service-desk/)
- **Discovery Park: Library Service Desk** [_ \(https://library.unt.edu/discovery-park/service-desk/\)](https://library.unt.edu/discovery-park/service-desk/), Room B112

[_ \(https://community.canvaslms.com/docs/DOC-10554-4212710328\)](https://community.canvaslms.com/docs/DOC-10554-4212710328)

Student Support Services

- **Registrar** [_ \(https://registrar.unt.edu/registration/\)](https://registrar.unt.edu/registration/)
- **Financial Aid** [\(https://financialaid.unt.edu/\)](https://financialaid.unt.edu/)
- **Student Legal Services** [\(https://studentaffairs.unt.edu/student-legal-services/\)](https://studentaffairs.unt.edu/student-legal-services/)
- **Career Center** [\(https://studentaffairs.unt.edu/career-center/\)](https://studentaffairs.unt.edu/career-center/)
- **Multicultural Center** [\(https://edo.unt.edu/multicultural-center/\)](https://edo.unt.edu/multicultural-center/)
- **Counseling and Testing Services** [\(https://studentaffairs.unt.edu/counseling-and-testing-services/\)](https://studentaffairs.unt.edu/counseling-and-testing-services/)
- **Student Affairs Care Team** [\(https://studentaffairs.unt.edu/care/\)](https://studentaffairs.unt.edu/care/)
- **Student Health and Wellness Center** [\(https://studentaffairs.unt.edu/student-health-and-wellness-center/\)](https://studentaffairs.unt.edu/student-health-and-wellness-center/)
- **Pride Alliance** [\(https://edo.unt.edu/pridealliance/\)](https://edo.unt.edu/pridealliance/)

Academic Support Services

- **Academic Resource Center** [\(https://clear.unt.edu/canvas/student-resources/\)](https://clear.unt.edu/canvas/student-resources/)
- **Academic Success Center** [\(https://success.unt.edu/asc/\)](https://success.unt.edu/asc/)
- **UNT Libraries** [\(https://library.unt.edu/\)](https://library.unt.edu/)
- **Writing Lab** [\(http://writingcenter.unt.edu/\)](http://writingcenter.unt.edu/)
- **MathLab** [\(https://math.unt.edu/mathlab/\)](https://math.unt.edu/mathlab/)

Course Requirements

Percentages of final grade are approximate and subject to change.

Grade Percentages

Category	Percentage of Final Grade
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Category	Percentage of Final Grade
Homework	35%
Quizzes	35%
Midterm	15%
Final Exam	15%
Total	100%

Grading

Grading scale

Final Grade	Letter
90.0 - 100	A
80.0 - 89.9	B
70.0 - 79.9	C
60.0 - 69.9	D
0.0 - 59.9	F

There is no curving of grades.

Course Topics

Course Topics

Module	Topics
1	Introduction and Tools
2	Database Design and Entity Relationship Diagrams
3	SQL Part 1
4	SQL Part 2
5	SQL Hands-On 1
6	SQL Hands-On 2
7	Indexes and B-Trees
8	Midterm
9	Spring Break
10	phpMyAdmin
11	NoSQL
12	APIs / REST
13	AWS Data Management
14	AWS Part 2
15	Final Review
16	Final Exam

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

All assignments are posted to Canvas and should be submitted to Canvas. No late submissions will be accepted for any reason. Please start work on assignments and quizzes well before the deadline and on a stable Internet connection to avoid any submission delays due to technical difficulties.

Examination Policy

You may use the Internet or any printed resources during exams, but please do not rely on this as the exams and quizzes have a time limit and the questions are not easily 'Google-able'. DO NOT POST quiz questions to any online venue or share quiz questions with other students. Violation of this policy will result in a zero for the assignment or exam. You may use online resources during the exam, but all quizzes and exams must be taken by yourself without human help.

Late Work

No late work is accepted. All submissions to Canvas must occur before the deadline. The instructor or TA cannot accept assignments via email.

Attendance Policy and Participation

Students are expected to regularly login to Canvas, keep up with assignments, and actively participate in online discussions and activities as posted.

Syllabus Change Policy

This syllabus, the grading scale, grades given on assignments, due dates, and any other course details are subject to change at any time without prior notice or consent.

UNT Policies

Academic Integrity Policy

Academic Integrity Standards and Consequences. According to UNT Policy 06.003, Student Academic Integrity, academic dishonesty occurs when students engage in behaviors including, but not limited to

cheating, fabrication, facilitating academic dishonesty, forgery, plagiarism, and sabotage. A finding of academic dishonesty may result in a range of academic penalties or sanctions ranging from admonition to expulsion from the University.

ADA Policy

UNT makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide a student with an accommodation letter to be delivered to faculty to begin a private discussion regarding one's specific course needs. Students may request accommodations at any time, however, ODA notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information see the [ODA website \(https://disability.unt.edu/\)](https://disability.unt.edu/).

Emergency Notification & Procedures

UNT uses a system called Eagle Alert to quickly notify students with critical information in the event of an emergency (i.e., severe weather, campus closing, and health and public safety emergencies like chemical spills, fires, or violence). In the event of a university closure, please refer to Blackboard for contingency plans for covering course materials.

Retention of Student Records

Student records pertaining to this course are maintained in a secure location by the instructor of record. All records such as exams, answer sheets (with keys), and written papers submitted during the duration of the course are kept for at least one calendar year after course completion. Course work completed via the Blackboard online system, including grading information and comments, is also stored in a safe electronic environment for one year. Students have the right to view their individual record; however, information about student's records will not be divulged to other individuals without proper written consent. Students are encouraged to review the Public Information Policy and the Family Educational Rights and Privacy Act (FERPA) laws and the University's policy. See UNT Policy 10.10, Records Management and Retention for additional information.

Acceptable Student Behavior

Student behavior that interferes with an instructor's ability to conduct a class or other students' opportunity to learn is unacceptable and disruptive and will not be tolerated in any instructional forum at UNT. Students engaging in unacceptable behavior will be directed to leave the classroom and the instructor may refer the student to the Dean of Students to consider whether the student's conduct violated the Code of Student Conduct. The University's expectations for student conduct apply to all

instructional forums, including University and electronic classroom, labs, discussion groups, field trips, etc. Visit UNT's [Code of Student Conduct \(https://deanofstudents.unt.edu/conduct\)](https://deanofstudents.unt.edu/conduct) to learn more.

Access to Information - Eagle Connect

Students' access point for business and academic services at UNT is located at: [my.unt.edu \(https://my.unt.edu/\)](https://my.unt.edu). All official communication from the University will be delivered to a student's Eagle Connect account. For more information, please visit the website that explains Eagle Connect and how to forward e-mail [Eagle Connect \(https://it.unt.edu/eagleconnect\)](https://it.unt.edu/eagleconnect).

Student Evaluation Administration Dates

Student feedback is important and an essential part of participation in this course. The student evaluation of instruction is a requirement for all organized classes at UNT. The survey will be made available during weeks 13, 14 and 15 of the long semesters to provide students with an opportunity to evaluate how this course is taught. Students will receive an email from "UNT SPOT Course Evaluations via IASystem Notification" (no-reply@iasystem.org) with the survey link. Students should look for the email in their UNT email inbox. Simply click on the link and complete the survey. Once students complete the survey they will receive a confirmation email that the survey has been submitted. For additional information, please visit the [SPOT website \(http://spot.unt.edu/\)](http://spot.unt.edu/) or email spot@unt.edu.

Sexual Assault Prevention

UNT is committed to providing a safe learning environment free of all forms of sexual misconduct, including sexual harassment sexual assault, domestic violence, dating violence, and stalking. Federal laws (Title IX and the Violence Against Women Act) and UNT policies prohibit discrimination on the basis of sex, and therefore prohibit sexual misconduct. If you or someone you know is experiencing sexual harassment, relationship violence, stalking, and/or sexual assault, there are campus resources available to provide support and assistance. UNT's Survivor Advocates can assist a student who has been impacted by violence by filing protective orders, completing crime victim's compensation applications, contacting professors for absences related to an assault, working with housing to facilitate a room change where appropriate, and connecting students to other resources available both on and off campus. The Survivor Advocates can be reached at SurvivorAdvocate@unt.edu or by calling the Dean of Students Office at 940-565- 2648. Additionally, alleged sexual misconduct can be non-confidentially reported to the Title IX Coordinator at oeo@unt.edu or at (940) 565 2759.

Important Notice for F-1 Students taking Distance Education Courses

Federal Regulation

To read detailed Immigration and Customs Enforcement regulations for F-1 students taking online courses, please go to the [Electronic Code of Federal Regulations website \(http://www.ecfr.gov/\)](http://www.ecfr.gov/). The

specific portion concerning distance education courses is located at Title 8 CFR 214.2 Paragraph (f)(6)(i) (G).

The paragraph reads:

(G) For F-1 students enrolled in classes for credit or classroom hours, no more than the equivalent of one class or three credits per session, term, semester, trimester, or quarter may be counted toward the full course of study requirement if the class is taken on-line or through distance education and does not require the student's physical attendance for classes, examination or other purposes integral to completion of the class. An on-line or distance education course is a course that is offered principally through the use of television, audio, or computer transmission including open broadcast, closed circuit, cable, microwave, or satellite, audio conferencing, or computer conferencing. If the F-1 student's course of study is in a language study program, no on-line or distance education classes may be considered to count toward a student's full course of study requirement.

University of North Texas Compliance

To comply with immigration regulations, an F-1 visa holder within the United States may need to engage in an on-campus experiential component for this course. This component (which must be approved in advance by the instructor) can include activities such as taking an on-campus exam, participating in an on-campus lecture or lab activity, or other on-campus experience integral to the completion of this course.

If such an on-campus activity is required, it is the student's responsibility to do the following:

- (1) Submit a written request to the instructor for an on-campus experiential component within one week of the start of the course.
- (2) Ensure that the activity on campus takes place and the instructor documents it in writing with a notice sent to the International Student and Scholar Services Office. ISSS has a form available that you may use for this purpose.

Because the decision may have serious immigration consequences, if an F-1 student is unsure about his or her need to participate in an on-campus experiential component for this course, s/he should contact the UNT International Student and Scholar Services Office (telephone 940-565-2195 or email internationaladvising@unt.edu (<mailto:internationaladvising@unt.edu>)) to get clarification before the one-week deadline.

Student Verification

UNT takes measures to protect the integrity of educational credentials awarded to students enrolled in distance education courses by verifying student identity, protecting student privacy, and notifying students of any special meeting times/locations or additional charges associated with student identity verification in distance education courses.

See **UNT Policy 07-002 Student Identity Verification, Privacy, and Notification and Distance Education Courses** (<https://policy.unt.edu/policy/07-002>) (<https://policy.unt.edu/policy/07-002>).

Use of Student Work

A student owns the copyright for all work (e.g. software, photographs, reports, presentations, and email postings) he or she creates within a class and the University is not entitled to use any student work without the student's permission unless all of the following criteria are met:

- The work is used only once.
- The work is not used in its entirety.
- Use of the work does not affect any potential profits from the work.
- The student is not identified.
- The work is identified as student work.

If the use of the work does not meet all of the above criteria, then the University office or department using the work must obtain the student's written permission.

Download the UNT System Permission, Waiver and Release Form













Transmission and Recording of Student Images in Electronically-Delivered Courses












1. No permission is needed from a student for his or her image or voice to be transmitted live via videoconference or streaming media, but all students should be informed when courses are to be conducted using either method of delivery.
2. In the event an instructor records student presentations, he or she must obtain permission from the student using a signed release in order to use the recording for future classes in accordance with the Use of Student-Created Work guidelines above.
3. Instructors who video-record their class lectures with the intention of re-using some or all of recordings for future class offerings must notify students on the course syllabus if students' images may appear on video. Instructors are also advised to provide accommodation for students who do not wish to appear in class recordings.




Example: This course employs lecture capture technology to record class sessions. Students may occasionally appear on video. The lecture recordings will be available to you for study purposes and may also be reused in future course offerings.

No notification is needed if only audio and slide capture is used or if the video only records the instructor's image. However, the instructor is encouraged to let students know the recordings will be available to them for study purposes.

Course Summary:

Date	Details	Due
Fri Jul 8, 2022	 AWS DynamoDB Quiz (https://unt.instructure.com/courses/69037/assignments/1419348)	due by 11:59pm
	 Codecademy SQL Quiz (https://unt.instructure.com/courses/69037/assignments/1419353)	due by 11:59pm
	 Data Serialization / LinkedIn NoSQL Video Quiz (https://unt.instructure.com/courses/69037/assignments/1419346)	due by 11:59pm
	 Final Exam (https://unt.instructure.com/courses/69037/assignments/1419350)	due by 11:59pm
	 Foundations of Programming: Databases Video Quiz (https://unt.instructure.com/courses/69037/assignments/1419357)	due by 11:59pm
	 Midterm (https://unt.instructure.com/courses/69037/assignments/1419344)	due by 11:59pm
	 phpMyAdmin Quiz (https://unt.instructure.com/courses/69037/assignments/1419354)	due by 11:59pm
	 Quiz - Database Design (https://unt.instructure.com/courses/69037/assignments/1419349)	due by 11:59pm
	 REST / API quiz (https://unt.instructure.com/courses/69037/assignments/1419358)	due by 11:59pm
	 SQL Bolt 10-18 Quiz (https://unt.instructure.com/courses/69037/assignments/1419359)	due by 11:59pm
	 SQL Bolt Part 1 Quiz (https://unt.instructure.com/courses/69037/assignments/1419351)	due by 11:59pm
	 AWS DynamoDB Assignment - Submit Your Screenshot Here (https://unt.instructure.com/courses/69037/assignments/1419360)	due by 11:59pm

Date	Details	Due
	 <u>Codecademy 'Learn SQL' Lesson - upload progress screenshot</u> https://unt.instructure.com/courses/69037/assignments/1419361	due by 11:59pm
	 <u>Create an ERD and Upload the PDF</u> https://unt.instructure.com/courses/69037/assignments/1419362	due by 11:59pm
	 <u>DynamoDB Part 2 - Queries - Upload Screenshot Here</u> https://unt.instructure.com/courses/69037/assignments/1419363	due by 11:59pm
	 <u>Index and B-Tree Quiz</u> https://unt.instructure.com/courses/69037/assignments/1419355	due by 11:59pm
	 <u>Intro Quiz</u> https://unt.instructure.com/courses/69037/assignments/1419347	due by 11:59pm
	 <u>LinkedIn SQL Essential Training Video Quiz</u> https://unt.instructure.com/courses/69037/assignments/1419345	due by 11:59pm
	 <u>NoSQL: Couchbase Install and Demo - Submit Screenshots</u> https://unt.instructure.com/courses/69037/assignments/1419364	due by 11:59pm
	 <u>SQL Bolt 1-9 Submit a Screenshot Here</u> https://unt.instructure.com/courses/69037/assignments/1419366	due by 11:59pm
	 <u>SQL Bolt 10-18 Submit a Screenshot Here</u> https://unt.instructure.com/courses/69037/assignments/1419365	due by 11:59pm
	 <u>Student Academic Integrity Policy Quiz</u> https://unt.instructure.com/courses/69037/assignments/1419367	due by 11:59pm
	 <u>Submit phpMyAdmin Table Screenshot here</u> https://unt.instructure.com/courses/69037/assignments/1419368	due by 11:59pm

Date	Details	Due
	 <u>Submit your pilaDB screenshot here</u> (<u>https://unt.instructure.com/courses/69037/assignments/1419369</u>)	due by 11:59pm
	 <u>Submit your Wordpress Screenshot Here</u> (<u>https://unt.instructure.com/courses/69037/assignments/1419370</u>)	due by 11:59pm
	 <u>W3 Schools SQL Quiz - Take The 25 Question Quiz and Upload a Screenshot of Your Score Here</u> (<u>https://unt.instructure.com/courses/69037/assignments/1419371</u>)	due by 11:59pm