

BCIS 5420-001 Foundations of Database Management Systems

Spring-2022

Instructor Contact

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DB Mondays Class Session 6:30 PM CST

Zoom Meeting ID: 870 0633 0837 **Password:** 5420-001

Zoom

URL: <https://unt.zoom.us/j/87006330837?pwd=dmNyVzk0ME50YzNtZWZWRPL2ZkbHg5QT09>

Zoom Office hours: Tuesdays @ 11:00AM to 12:00 PM/Noon CST (or by appt)

Zoom Meeting ID: : 550 363 5876 **Password:** 14221

Zoom URL:

<https://unt.zoom.us/j/5503635876?pwd=SXRPZ3JVZWFabk92NXptYW83UHY4dz09>

Tutor: TBD **Tutor Zoom hours:** TBD

Communication Preference:

1. Use discussion board on Canvas.
2. Email, for faster response, please use subject line prefix 5420-S22-001 <your topic>
3. Text for **urgent** situations (716-830-6129): Use prefix: 5420-S22-001: your name. Incomplete texts will not be responded to.
4. Call in case of a real emergency!
5. Please DO NOT send me WhatsApp, Signal, Teams, Messenger or any social medial messages.
6. Please review communication guidelines at [Online Communication Tips](https://clear.unt.edu/online-communication-tips)
(<https://clear.unt.edu/online-communication-tips>)

Course Description

Introduction to database and database management systems technology within the framework of a business environment. Topics include the study of analysis, design, development, and implementation of database-oriented file organizations in business applications.

Course Structure

This is a graduate level class for all majors, it is part of the BCIS Master of Science programs. Consequently, it will be an intensive learning experience. The students in this class should be knowledgeable, inquisitive, persevering, and highly self-motivated. Thus, the knowledge gained will be limited only by the efforts put forth by the individual. Students will receive outside assignments in terms of reading material and computer work. Direction will be given on all outside work. However, it is the student's responsibility to determine their level of understanding of the assignments, ask for additional clarification and amplification when necessary, and complete that work in a timely manner. Students are responsible for all reading assignments, whether directly addressed in class or not.

Class meeting is required, attendance will be taken (almost) every time and all are encouraged to attend and ask questions. During the class meeting, instructor will go over the module for the week in detail using the book chapter and the slides.

Please Note: Any face-to-face class meetings as well as the Q&A sessions for online courses will be video recorded and made available to all the students during the semester. Further, these class recordings may be used in the future for instructional purposes.

Course Prerequisites or Other Restrictions

The most important prerequisite is the ability to reason, get work done on time, and ask questions. Did we mention that ability to ask questions is a prerequisite? If not, here it is again, please do develop, borrow, buy, or somehow acquire a habit to ask questions!

Course Objectives

This course is an introduction to database design in a corporate environment. Its primary focus is on the technical and management issues of database technology. The student will analyze, design, develop, and implement a database-oriented business application. Upon completion of the course, the student should be able to define, create, load, and manipulate a database supporting some workflow in an organization.

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

1. Model various business workflows using entity-relationship diagrams
2. Use SQL to design and implement ER diagrams into an actual relational database
3. Use SQL to query data
4. Understand why we need NoSQL databases and how to use them.
5. Understand what “big data” is and why we need to deal with it.

Materials

Please arrange access to the following at your earliest.

- Week-0: Textbook: title *Modern Database Management, 13th edition*; authors are Hoffer, Jeffery A., Remesh, V., and Topi, Heikki; publisher Pearson. [E book to rent for the course](https://bulk-store.vitalsource.com/products/modern-database-management-jeff-hoffer-ramesh-v9780134792293) (https://bulk-store.vitalsource.com/products/modern-database-management-jeff-hoffer-ramesh-v9780134792293)

- Week-0,1: Get your own login & **workspace** for [Apex](#) website for access to Oracle DB

Supplementary websites and/or readings:

- [W3 Schools for SQL Practice](#)
- [Mongo DB Tutorial and Practice Site](#)
- [This site allow you to run some SQL queries that you can write at the site.](#)
- [This site has given a number simpler examples for different options for SELECT statement.](#)

Teaching Philosophy

Based on my 25-years of industry experience, I like to provide bigger context in which specific tools and technologies are used. I believe this makes the theory come alive. I also expect students to come to class with some questions and at the end, leave the class with some other questions!

Technical Requirements & Skills

General Requirements

- Reliable connection to the internet that can support video streaming.
- Install UNT's Respondus browser on the laptop/desktop [from UNT Recommended site](#) (<https://download.respondus.com/lockdown/download.php?id=165715487>.)
- Install Zoom app on laptop/desktop and optionally on your smart phone or other suitable devices.

Laptop/Desktop Requirements

- It is preferred to have a laptop with a minimum of 8GB RAM and at least 10 GB free space.
- Operating System: Windows 10 or newer; Mac 2009 or newer.
- Ensure the Webcam, speakers, and microphones are working.
- Most of the software used in ITDS Department courses uses Microsoft Windows-based software, so please ensure you can use MS Windows-based software as needed by your course. Those with Mac are strongly recommended need to install a Windows VM (virtual machine) since Mac software sometimes differs from the Windows software.

Computer Skills & Digital Literacy

- Using Canvas
- Using email with attachments
- Downloading and installing software
- Using presentation and graphics programs

Rules of Engagement

Rules of engagement refer 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.
- Unless specifically invited, don't refer to your instructor by first name.
- Use clear and concise language.

- Remember that all college level communication should have correct spelling and grammar (this includes discussion boards).
- Avoid slang terms such as “wassup?” and texting abbreviations such as “u” instead of “you.”
- Use standard fonts such as Ariel, Calibri or Times new Roman and use a size 10 or 12 point font
- Avoid using the caps lock feature AS IT CAN BE INTERPRETTED AS YELLING.
- Limit and possibly avoid the use of emoticons like :) or ☺.
- Be cautious when using humor or sarcasm as tone is sometimes lost in an email or discussion post and your message might be taken seriously or sound offensive.
- Be careful with personal information (both yours and other’s).
- Do not send confidential information via e-mail

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

Success in an Online Course

While the online classroom shares many similarities with the face-to-face classroom, success in online education requires certain skills and expectations that one may not be aware of. Please review this webpage, [“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).

Course Content

Week	Date	Topics and Readings	Deliverable
1	Jan-24	Course overview / self-introductions / chit-chat... + Create and Populate a DB on Oracle Apex	One blank sheet of paper.
2	Jan-31	Ch.1: The Database Environment and Development Process	Assignment 1 Project Part-1, 2 Available
3	Feb-07	Ch.2: Modeling Data in the Organizations + Working with MS-SQL	Assignment 1 due Assignment 2 Available
4	Feb-14	Ch.5: Introduction to SQL	
5	Feb-21	Ch 5: SQL Queries In-Depth, In-Class Exercises.	Project Part-1 Due Assignment 3 Available
6	Feb-28	Ch. 3: The Enhanced E-R Model Ch.6: Advanced SQL	Assignment-2 Due
7	Mar-07	Midterm Exam 6:30 – 8:30 pm CST (Ch. 1 – 3, 5) Respondus Lockdown Browser with WebCam	
	Mar-14	NO CLASS – Spring Break	
8	Mar-21	Ch.6: Advanced SQL-Review	Assignment 4 Available
9	Mar-28	Ch.4: Logical Database Design and the Relational Model Ch.8: Physical Database Design and Performance	Assignment 3 Due
10	Apr-04	Ch 10: Big Data Technologies & Intro to NoSQL + Practice Exam for the Hands-on Exam	
11	Apr-11	Mongo DB Introduction	Project Part-2 due
12	Apr-18	Mongo DB – Hands-on; Help with Assignment-4	
13	Apr-25	Review for the Hands-on and the Final Exam.	Assignment 4 due
14	May-02	In-Class Hands-on Exam	
15	May-09	Final Exam 6:30 – 8:30 pm CST (Ch. 4, 5, 6, 8, 10, NoSQL & Mongo DB) Respondus Lockdown Browser with WebCam	

Course Requirements

Assignment, Exam, Presentation, Projects, Quizzes	Points Possible
Mid-Term Exam (100 Questions each 1.5 points)	150
Final Exam (150 Questions each 1.67 points)	250
4 Assignments, (Team based), Assignments-1,2,3 (40 points each), Assignment-4: 30 points	150
9 Chapter Quizzes: Ch 1,2, 3, 5, MongoDB: each 20 points Ch 4, 6, 8, 10: each 25 points	200
Practical Exam (in-class)	100
Database Project Part-1 (Team based)	25
Database Project Part-2 (Team based)	25
Total Points Possible	900 points

Grading

We will use the following grading scale (A-F) based on the total points earned including any bonus points:

A = 810-900

B = 720-809

C = 630-719

D = 540-629

F = 0-539

Under rare circumstances, instructor may apply some curve and/or offer opportunity to earn bonus points.

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.

UIT Help Desk: <http://www.unt.edu/helpdesk/index.htm>

Email: helpdesk@unt.edu

Phone: 940-565-2324

In Person: Sage Hall, Room 130

Walk-In Availability: 8am-9pm

Telephone Availability:

- Sunday: noon-midnight
- Monday-Thursday: 8am-midnight
- Friday: 8am-8pm
- Saturday: 9am-5pm

Laptop Checkout: 8am-7pm

Course Policies

Examination Policy

No make-up exams, quizzes, projects or assignments are given without an appropriate University approved excuse. The exam will be administered in-class and/or online and will always require lockdown browser. You cannot use any outside resources like Google or third-party websites or person to complete the exam, using it would be considered ethical violation. Any issues related to on time completion or credit for the work modules and online quizzes/exams should be resolved with the instructor within one week following their respective due dates. Such issues cannot be considered weeks later and especially not during compilation of the final grades, at the end of the semester.

Late Work

There are no late submissions for Module quizzes, assignments, projects, mid-term and Final Exam. They have strict deadlines. Under some extreme circumstance instructor may change this with necessary documentation per university guidelines. No credit is awarded for any work completed after the final exam date.

Attendance Policy

For a face-to-face course, attendance is strongly recommended, and if you are an international student please check with your international advisor about your responsibilities, the course instructor is NOT an authoritative source to give any guidance to you about your visa related requirements. For an online course, you are required to complete the assignments as stated in the course syllabus to achieve your required grade. We do not take attendance during the office hours, and they are for general questions. During the semester, there may be one or two sessions where we may require your presence online if you are unable to attend those – please discuss your options with the instructor. Remember all assignments and Exams have strict deadlines and time window, complete them within that time.

COVID-19 Impact on Attendance

While attendance is expected as outlined above, it is important for all of us to be mindful of the health and safety of everyone in our community, especially given concerns about COVID-19. Please contact me if you are unable to attend class because you are ill, or unable to attend class due to a related issue regarding COVID-19. It is important that you communicate with me prior to being absent so I may make a decision about accommodating your request to be excused from class.

If you are experiencing cough, shortness of breath or difficulty breathing, fever, or any of the other possible [symptoms of COVID-19](https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html) (<https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html>) please seek medical attention from the Student Health and Wellness Center (940-565-2333 or askSHWC@unt.edu) or your health care provider. UNT also asks that you contact at COVID@unt.edu for guidance on actions to take due to symptoms, pending or positive test results, or potential exposure. While attendance is an important part of succeeding in this class, your own health, and those of others in the community, is more important.

Student Grievances

Any unresolved issue (affecting grade/standing etc.) remaining at the end of the semester may be followed up with me ASAP. This may save initiation of any appeals procedures (though time-consuming, those options are always available to students).

Syllabus Change Policy

I do not anticipate that any due dates will change. However, I reserve the right to make any changes to the syllabus that I deem necessary.

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. For this course, the ITDS ethics statement clearly delineates what activities are considered as violation, including some examples. An academic integrity violation will lead to a "F" grade in this course.

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/>).

The College of Business Administration complies with the Americans with Disabilities Act in making reasonable accommodations for qualified students with disability. If you have an established disability as defined in the "Act" and would like to request accommodation, please contact the ODA and your instructor (Dr. Pravin) as soon as possible: the instructor's office hours and phone number are in the syllabus.

Prohibition of Discrimination, Harassment, and Retaliation (Policy 16.004)

The University of North Texas (UNT) prohibits discrimination and harassment because 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 in its application and admission processes; educational programs and activities; employment policies, procedures, and processes; and university facilities. The University takes active measures to prevent such conduct and investigates and takes remedial action when appropriate.

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 Canvas 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 Canvas 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. 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 [insert administration dates] 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) 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.

Academic Support & Student Services

Student Support Services

Mental Health

UNT provides mental health resources to students to help ensure there are numerous outlets to turn to that wholeheartedly care for and are there for students in need, regardless of the nature of an issue or its severity. Listed below are several resources on campus that can support your academic success and mental well-being:

- [Student Health and Wellness Center](https://studentaffairs.unt.edu/student-health-and-wellness-center) (<https://studentaffairs.unt.edu/student-health-and-wellness-center>)
- [Counseling and Testing Services](https://studentaffairs.unt.edu/counseling-and-testing-services) (<https://studentaffairs.unt.edu/counseling-and-testing-services>)
- [UNT Care Team](https://studentaffairs.unt.edu/care) (<https://studentaffairs.unt.edu/care>)
- [UNT Psychiatric Services](https://studentaffairs.unt.edu/student-health-and-wellness-center/services/psychiatry) (<https://studentaffairs.unt.edu/student-health-and-wellness-center/services/psychiatry>)
- [Individual Counseling](https://studentaffairs.unt.edu/counseling-and-testing-services/services/individual-counseling) (<https://studentaffairs.unt.edu/counseling-and-testing-services/services/individual-counseling>)

Chosen Names

A chosen name is a name that a person goes by that may or may not match their legal name. If you have a chosen name that is different from your legal name and would like that to be used in class, please let the instructor know. Below is a list of resources for updating your chosen name at UNT.

- [UNT Records](#)
- [UNT ID Card](#)
- [UNT Email Address](#)
- [Legal Name](#)

**UNT eulDs cannot be changed at this time. The collaborating offices are working on a process to make this option accessible to UNT community members.*

Pronouns

Pronouns (she/her, they/them, he/him, etc.) are a public way for people to address you, much like your name, and can be shared with a name when making an introduction, both virtually and in-person. Just as we ask and don't assume someone's name, we should also ask and not assume someone's pronouns.

You can [add your pronouns to your Canvas account](#) so that they follow your name when posting to discussion boards, submitting assignments, etc.

Below is a list of additional resources regarding pronouns and their usage:

- [What are pronouns and why are they important?](#)
- [How do I use pronouns?](#)
- [How do I share my pronouns?](#)
- [How do I ask for another person's pronouns?](#)
- [How do I correct myself or others when the wrong pronoun is used?](#)

Additional 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>)
- [Pride Alliance](https://edo.unt.edu/pridealliance) (<https://edo.unt.edu/pridealliance>)
- [UNT Food Pantry](https://deanofstudents.unt.edu/resources/food-pantry) (<https://deanofstudents.unt.edu/resources/food-pantry>)

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>)