MATH 2700_006 Linear Algebra

Welcome to UNT!

As members of the UNT community, we have all made a commitment to be 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.

Instructor Contact

Name: Dr. Huguette Tran
Pronouns: (she/her/hers)
Office Location: GAB 421
Office Hours: M 10am -12pm in GAB 421; T & Th 3:30pm-4:30pm remote tutoring sessions, meeting ID 841 4830 5391
Email: Huguette.Tran@unt.edu

Each week we have two remote tutoring sessions, with meeting ID 841 4830 5391, on Tuesday and Thursday for you to ask questions. Each session lasts one hour and starts at 3:30pm; you can click on https://unt.zoom.us/j/84148305391 to enter the sessions. We also have two face-to-face office hours on Monday 10am -12pm in GAB 421. I encourage you to attend the tutoring sessions or visit me during the face-to-face office hours for additional help.

Communication Expectations:

For course related issues, I prefer that you contact me using Canvas message system and I will reply within the next business day. My office does not have phone.

While I want to make myself as available as possible to each of you, I do have to place some limitations on when I can be contacted. If you have a question, please contact me via Canvas. I will respond within 24 hours on weekdays (usually sooner). Please do not expect a response over the weekend.

IMPORTANT: This course may employ lecture capture technology to record the remote tutoring sessions and students may occasionally appear on video. The lecture recordings may be available to you for study purposes and may also be reused in future course offerings.

Course Description

Vector spaces over the real number field; applications to systems of linear equations, linear transformations, matrices, determinants, and eigenvalues.

Course Structure

This course takes place 100% online and the presentation is asynchronous. This means that there are no scheduled class times, instead you will work through the class material using the notes, videos, and other materials posted here in Canvas. There are 15 weeks of content that you will move through. I will open up a new module each week.

Exam Dates:

•   Midterm 1: Feb 13, 2021 at 9:30 am – 10:50 am

•   Midterm 2: March 20, 2021 at 9:30 am – 10:50 am

•   Midterm 3: April 17, 2021 at 9:30 am – 10:50 am

•   Final Exam: April 24, 2021 at 10:30 am – 12:30 am

Course Prerequisites or Other Restrictions

- Math 1720 (Calculus II)

Course Objectives

Upon successful completion of this course, students will be able to:

- Solve linear systems of equations using a variety of different methods.
- Identify linear independent (or dependent) sets of vectors.
- Apply methods of solving linear systems to a variety of science, engineering, and business problems.
- Perform matrix operations such as addition and multiplication.
- Find matrix inverses and determinants.
- Identify invertible (or non-invertible) matrices and understand equivalent properties.
- Recognize vector spaces, subspaces, and bases.
- Compute the dimension of subspaces and find bases for subspaces.
- Change coordinates from one basis to another.
- Find the eigenvalues and eigenvectors of matrices and use this information to diagonalize matrices if possible.
- Use eigenvalues and eigenvectors to solve application problems.
- Identify orthogonal set and find orthogonal projections.
- Create an orthogonal basis from an arbitrary basis.

Materials

Linear Algebra and Its Applications by David Lay, Stephen Lay, Judi MacDonald (5th edition).

Teaching Philosophy

This course takes place 100% online and the presentation is asynchronous. This means that there are no scheduled class times, instead you will work through the class material using the notes, videos, and other materials posted here in Canvas. There are 15 weeks of content that you will move through. I will open up a new module each week. However, I schedule 2 remote office hours per week for you to ask questions. To be successful in this course, you must be willing to put in three hours of work per week to absorb the material in each module (as if you are attending a face-to-face class) plus time to do homework. It is very difficult to catch up if you fall behind since new contents are built upon previous ones.

Course Technology & Skills

Minimum Technology Requirements
Minimum technology requirements for students, such as:

- Computer
- Reliable internet access to submit homework (and possibly quizzes and exams)
- Lockdown Browser with Webcam (which can be downloaded from Canvas)
- Reliable scanner or scanning app to convert your written work to pdf files
- Canvas Technical Requirements (https://clear.unt.edu/supported-technologies/canvas/requirements)

Computer Skills & Digital Literacy
Technical skills learners must have to succeed in the course:

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

Technical Assistance
Here at UNT we have a Student Help Desk that you can contact for help with Canvas or other technology issues.

UIT Help Desk: UIT Student Help Desk site (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

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

Course Requirements

- Homework Assignments (15% of your grade, 2 lowest dropped at the end of the semester)
- Quizzes (20% of your grade, 1 lowest dropped at the end of the semester)
- Exams and Final Exams (65% of grade)

Grading (no rounding)

Include the grading scale (A-F) along with the point totals/percentages you will use to calculate the final grade. For example:

- A: 90-100%
- B: 80-89%
- C: 70-79%
- D: 60-69%
- F: 59 and below

Grade Related Policies

Late Work

Late work is not accepted in this course. Work turned in after the deadline will receive a grade of zero. Technological issue is not a valid excuse for late submission. It is your responsibility to make sure you have reliable internet connection and to upload assignments on time. Do not plan on uploading and submitting your documents at the last minute, this process can take time to complete.

Make-Up Exams/Quizzes

There will be no make-up for quizzes and exams in this course. If you miss a quiz or an exam, you will receive a zero for the quiz or the exam.

However, if you miss an exam, but have a university excused absence according to UNT Policy 06-039 (https://policy.unt.edu/policy/06-039) and provide documentation within 48 hours of the missed exam, then you can replace the zero with the final exam grade.

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

Homework

Each week there will be homework that you will submit on Canvas in a pdf file for the sections covered that week before midnight of Monday. Keep in mind you will have to check Canvas frequently to keep up with the due dates, there will not be reminders in Canvas. Your lowest 2 homework scores will be dropped.

Quizzes

There will be approximately 15 quizzes. You may access them through the Quizzes tab on the left side of the navigation menu. You work on the homework before you attempt the quiz. Thus, the quiz will not be open at the beginning of the week. The quiz each week will become available at 12am Tuesday and close at 11:59 pm Tuesday. Once the quiz is opened, you will have about 20-30 minutes to complete and upload the quiz.

Exams

Midterms and Final exams are closed books and are administered under Lockdown Browser with Webcam. Each of three midterm exams, including time for uploading, lasts 75 minutes. You must stop working after 60 minutes to start submitting the exam. You will have 15 minutes from when you start submitting your exam to make a scan and upload your work. Submission is considered late if it is submitted after 75 minutes. There will be a late penalty of 2 points per minute and no exam is accepted after 80 minutes.

The Final lasts 120 minutes, including time for uploading. You must stop working after 105 minutes to start submitting your exam. You will have 15 minutes from when you start submitting your exam to make a scan and upload your work. The submission is considered late if it is submitted after 120 minutes. There will be a late penalty of 3 points per minute and no exam is accepted after 125 minutes.

Be prepare for written questions on exams and on some quizzes. Get a piece of paper with your name ready, just in case, for written questions. You will be required to complete the problems on your own paper and scan and upload your responses for specific problems into Canvas in pdf format.

Do not open the exam or the quiz unless you are prepared to work, and your technology is ready and in working order. Extra time will not be granted to account for technical /internet difficulties and work will not be accepted through email.

You will be able to see feedback on the exam and your grade within Canvas about 1 week after the exam or the quiz. You may ask me to go over the problems with you. However, all decisions on partial credit are final and not open for discussion.

Instructor Responsibilities and Feedback

I aim to return graded work to you within one week of the due date. When this is not possible, I will send an announcement to the class. I tend to give detailed comments on your work and my comments will appear next to your submission on Canvas.

Attendance Policy

Proof of attendance will be based on submission of homework and quizzes.

Class Participation

Class participation is encouraged. Please be respectful of the instructor and your classmates in your communication. More information on acceptable in-class behavior can be found in the UNT Policies and in the Rules of Engagement sections.

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 personal experiences. Use "I" statements to share thoughts and feelings. Try not to speak on behalf of groups or other individual's 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) for more information.

Additional Help

Besides attending tutoring sessions and office hours, students should visit Math Lab for additional help.

- MathLab (https://math.unt.edu/mathlab)

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/).

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) 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).

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/) 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/). 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).

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.

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)
- Counseling and Testing Services (https://studentaffairs.unt.edu/counseling-and-testing-services)
- UNT Care Team (https://studentaffairs.unt.edu/care)
- UNT Psychiatric Services (https://studentaffairs.unt.edu/student-health-and-wellness-center/services/psychiatry)
- 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 euIDs 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:

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

Additional Student Support Services

- Registrar (https://registrar.unt.edu/registration)
- Financial Aid (https://financialaid.unt.edu/)
- Student Legal Services (https://studentaffairs.unt.edu/student-legal-services)
- Career Center (https://studentaffairs.unt.edu/career-center)
- Multicultural Center (https://edo.unt.edu/multicultural-center)
- Counseling and Testing Services (https://studentaffairs.unt.edu/counseling-and-testing-services)
- Pride Alliance (https://edo.unt.edu/pridealliance)
- UNT Food Pantry (https://deanofstudents.unt.edu/resources/food-pantry)

Academic Support Services

- Academic Resource Center (https://clear.unt.edu/canvas/student-resources)
- Academic Success Center (https://success.unt.edu/asc)
- UNT Libraries (https://library.unt.edu/)
- Writing Lab (http://writingcenter.unt.edu/)