DTSC 5502: Analytic Tools, Techniques and Methods Link to the course calendar

Instructor Contact

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TA Contact

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Communication Expectations

You will be expected to check university email and attend class regularly. When you miss a class, you are expected to check the course calendar shortly after class to be aware of assignments, readings, and other materials. Questions not answered in class are best asked before or after class. For quick questions, email is preferred and you can expect a response within 24 hours during the work week (M-F). For involved questions or discussions, please contact the TA, and if the issue is not resolved, contact the instructor. In regard to a group project, it is beneficial to meet with multiple people simultaneously (rather than separate individual meetings discussing the same project) so please coordinate with your group to schedule a project-related meeting.

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.

Course Description

This course covers comprehensive and practical approaches to research, including specific methods of analysis for students to develop advanced research skills in the general areas of descriptive statistics, exploratory data analysis, and confirmatory data analysis. The course includes methods to better communicate results of the research. Successful students will have the skills to be useful participants in the data lifecycle from collection to management, analysis, and visualization of results.

Course Structure

Time: Monday (Aug 18 - Dec 8), 2:30 - 5:20 pm

Course modality: face-to-face (Section 020) and online (Section 401)

Location: Discovery Park K120

Credit hours: 3

Course Prerequisites or Other Restrictions

This course does not have any prerequisites beyond high-school algebra. The curriculum and format is designed specifically for students who have not previously taken statistics or computer science courses, however, experience with Python is beneficial as it is used extensively in the course.

Course Objectives

The course teaches analytic tools, techniques and methods for data science. It covers the critical concepts and areas in data science. These include languages for transforming, querying and analyzing data, algorithms for machine learning methods including regression, classification and clustering, principles of data visualizations, statistical concepts of measurement error and prediction, and techniques for scalable data processing. We explore key areas of data science including question formulation, data collection and cleaning, visualization, statistical inference, predictive modeling, and decision making. By the end of this course, students will be able to:

- 1. develop programs using Python tools and libraries for basic data science tasks including data collection, data cleaning, data transformation, data management, data analytics, and data visualization;
- 2. select and use analytic tools, techniques, and methods to address real-world data science problems;
- 3. manage collections of data, create automated processes for analysis, use collaborative tools, and rapidly report quantitative findings;
- 4. apply basic principles of predictive modeling for accurate, explainable predictions including proper hyperparameter tuning, model selection, and validation;
- 5. articulate key advances in contemporary data science and describe the skill sets needed to be successful in a data science career.

Materials

Textbooks:

- 1. Computational and Inferential Thinking: The Foundations of Data Science by Ani Adhikari and John DeNero, https://www.inferentialthinking.com/chapters/intro. Free available online.
- 2. Principles and Techniques of Data Science, by Sam Lau, Joey Gonzalez, and Deb Nolan, https://www.textbook.ds100.org. Free available online. (optional).
- 3. Introduction to Computation and Programming Using Python: With Application to Understanding Data. 2nd ed., by John Guttag. MIT Press, 2016. ISBN: 9780262529624. (optional).

Teaching Philosophy

I have a strong active learning approach to teaching where I prefer students to not just accept what I tell them, but rather directly experience the benefit of what they learn. I always try to mix new didactic content directly with applications of it, emphasizing that although you may have learned an explicit set of facts, the implicit knowledge needed for more fluid application takes time and effort. In this course students are expected to finish a set of practical tasks similar to the tutorial examples with the help of

the instructor and the TA in the last third of the class. Under this setup, students will be more motivated and make rapid progress relative to a traditional lecture style.

I also find group-based project efforts to be the pinnacle of student self-evaluation and motivation. I help students develop their own goals and structure a path through projects they find appealing. Although properly advising in-class projects requires significantly more work than traditional teaching, the payoff in terms of motivation and drive for students is substantial. The benefits of projects are even greater for the most creative and driven students, who are set free from the constraints and expectations of assignments and exams. The emphasis on project efforts even in an introductory class can make the reasons for what they have learned "come to life". Seeing what others at their skill level can do with focus and effort demonstrates in ways that no amount of lecture material is able to. I look forward to inspiring students in this way in this course.

Course Technology & Skills

Minimum Technology Requirements

Computers/Laptops are **required during class and exams**. You will be expected to connect to the UNT wireless network. If you don't own a laptop, you may borrow one from the library: https://library.unt.edu/services/laptop-checkout/

- In-class labs: You will need a computer/laptop to do lab assignments.
- In-class exams: You will need a computer/laptop to take the exams. These will be done individually on your laptop in class. Exams will use the Canvas quiz system: Canvas Technical Requirements (https://clear.unt.edu/supported-technologies/canvas/requirements)
- In-class lectures and demos: Computers/Laptops are not required, but may help in understanding and applying the material.

Computer Skills & Digital Literacy

The following technical skills are required to succeed in the course:

- Using Canvas
- Using email with attachments
- Downloading and installing Anaconda Python version 3 and be able to open an Jupyter notebook
- Using presentation programs

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: 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-8pmSaturday: 9am-5pmLaptop Checkout: 8am-7pm

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

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:

- 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 <u>Engagement Guidelines</u> (https://clear.unt.edu/online-communication-tips) for more information.

Course Requirements

Readings/Tutorials: These will be available on the course calendar. Expectations of what is learned will be discussed in class and, as will be clear in the first few weeks, lab assignments will test your knowledge on the most important aspects of the readings/tutorials only.

Lab assignments: Lab assignments are designed to engage you in your learning, so you can begin to apply these principles in practice and tailor them to your needs. These assignments are supposed to be finished during lab sections in class, with the help of the instructor, the TA, and your classmates. Unless otherwise specified, assignments are due at midnight exactly one week after they are assigned (allowing for questions in class on the day the assignment is due). Results should be presentable, with appropriate comments for someone to follow what you have done. Assignments can be done individually or in a group of no more than 3 people, but must be submitted to Canvas individually unless otherwise specified. If you complete an assignment in a group, please indicate the names of the group members in the assignment. Notably, low-point assignments are more for learning and self-evaluation than assessment.

Topic presentations: There are far more tools and techniques than we can possibly cover, many of which may be particularly relevant to your interests. Also, the ability to distill complex topics into a form useful

for the audience is a critical skill to develop. **Students will be expected to present one concept, tool, or technique which goes beyond what is covered in the course**. Each presentation is to be 30-50 minutes with slides. These presentations will be spread over the course. Students may be quizzed on the material presented in these presentations; however, it will only be basic familiarity of the topic that can be learned from the slides or by paying attention to the presentation in class.

Projects: After a few weeks into the course you will select among a number of collaborative projects. Project brainstorming, proposals, consultations, presentations, reports, and final reviews will be part of the process. You are required to work in groups, as this is part of a full and complete education. All people in the group are expected to contribute. Members in the same group may receive different grades based on the contributions. This is your opportunity to demonstrate what you have learned in a way that reaches beyond the selection of tools, data sets, and approaches demonstrated in the course. Commonly students find a unique, complex data set and associated learning problem and apply the techniques presented in the class. The goal here is to create a coherent, completed project for presentation at the end of class. Essentially ask yourself what you would want to show an employer (or brag about to others) demonstrating what you have learned in the course.

Exams: There will be 3 exams. Exams will resemble assignments, but will be on a new data set with a slightly different request for tasks. Exams must be taken in the classroom. Time will be limited, and all work will be individual. You are strongly encouraged to attempt to solve the tasks iteratively and incrementally - write code that works first, but works poorly, and improve from there, rather than write perfect code top to bottom. Exams are cumulative, but the emphasis will be on the newer material. Exam days are already posted and are considered fixed. Prior arrangements can potentially be made without loss of points, but have to be discussed. **Exams cannot be missed without prior arrangements or later documented proof of extenuating circumstances.**

Grading

Grades are determined by a simple points system, with a total of *at least* 100 pts given though more than 100 points are likely. The expected distribution of points is given below, with the exact scale determined by point values given for each assignment, project, or exam - this is subject to minor modification based on actual points given. Note, due to the nature of the course, exams are a significant means of establishing your final grade, so please complete the assignments in a timely way and study appropriately prior to each exam.

Activities	Points Possible	Percentage of Final Grade
Lab Assignments • 10 assignments @ 3 points ea	30 points	30%
Topic Presentation	5 points	5%
Group Project		20%
 Brainstorming 	1 point	
Proposal	3 points	
Consultation	1 point	
• Report	5 points	

 Presentation 	5 points	
Individual Evaluation	5 points	
Exams	45 points	45%
3 exams @ 15 points ea		
Total Points	100 points	100%

Grading Scale: A>=90, B=80-89.9, C=70-79.9, D=60-69.9, F=0-59.9 pts. No exceptions. If class grades are low (e.g. I expect the vast majority of students will end with A's and B's), extra points will be added to all the students in the class (we do not assign extra work or extra points for individuals). Note, these grades are based on points and not percentages, so if 120 points are given, you only need 90/120 for an A!

Note: All questions about grades must be brought up within a week after the grades are released. No grade change can be made afterwards.

Course Evaluation

Student Perceptions of Teaching (SPOT) is the student evaluation system for UNT and allows students the ability to confidently provide constructive feedback to their instructor and department to improve the quality of student experiences in the course. Spot evaluations will be available **Nov 11 - Dec 4**.

Course Policies

Attendance

Attendance is required in the weeks of topic presentation, project brainstorming and exams. All points will be deducted (5 pts for topic presentation, 1 pt for project brainstorming, 15 pts for each exam) if absent in those weeks without prior arrangements or later documented proof of extenuating circumstances.

I have great respect for students who are balancing the demands of their coursework with the responsibilities of caring for family members. If you run into challenges that require you to miss a class, please contact me or my TA as soon as possible. There may be some flexibility we can offer to support your academic success.

If you are experiencing any symptoms of COVID-19

(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 PRIOR to coming to campus. UNT also requires you to contact the UNT COVID Team at COVID@unt.edu for guidance on actions to take due to symptoms, pending or positive test results, or potential exposure.

Course Materials for Remote Instruction

Remote instruction may be necessary if community health conditions change or you need to self-isolate or quarantine due to COVID-19. Students will need access to a computer/laptop with a webcam and microphone to participate in fully remote portions of the class. Information on how to be successful in a remote learning environment can be found at https://online.unt.edu/learn

Class Participation

Students must complete assignments, exams, presentations, and project work in time to receive the points associated with each activity.

Late Work

When assignments and project work are turned in after the due date, this places an undue burden on the instructor and the TA, especially when this policy is abused. As a compromise, if the assignment or project work is turned in *prior to grading* there will be no reduction in points, however, grading can occur any time after the due date (including the following morning!). A request for missing submissions may be sent at the discretion of the TA and the instructor, but is not guaranteed, and a reduction of points may also occur in a way that is consistent for the rest of the class.

Examination Policy

Exams will be on the computer/laptop using the Canvas quiz system. You need to bring a laptop if no computer is available in the classroom on the appropriate exam days. Make sure your laptop battery can last more than 2 hours. Exams are open book, open note, and open internet unless otherwise specified in advance, however, you shouldn't search for the solution online or use LLM tools, and no communication with others other than the instructor or the TA is allowed in any form (e.g., email, chatting, etc.). Exams must be taken at the same time in the classroom unless special accommodations have been made through the Office of Disability Accommodation (ODA). Other accommodations must be given by prior arrangement with the instructor, otherwise documentation proving an extenuating circumstance will have to be provided after the missed exam. Time will be limited, and all work will be individual. Anyone involved in cheating (copying other students' exams or exams in the previous semesters, searching the same question on chegg.com, helping others cheat, posting the question online, etc.) will receive 0 points in the exam and drop a letter in the final grade. Exams will focus on the most recent material but are expected to be cumulative in scope.

Technical Errors during Exams

If during an online exam there is a technical error which affects your ability to complete the exam, you are immediately to let the exam proctor know and the exam proctor will discuss ways to allow you to resume the test without giving an unfair advantage. In the event of any unexpected server outage or any unusual technical difficulty which prevents students from completing a time sensitive assessment activity, the instructor will extend the time windows and provide an appropriate accommodation based on the situation. Students should immediately report any problems to the instructor and contact the UNT Student Help Desk: helpdesk@unt.edu or 940.565.2324 and obtain a ticket number. The instructor and the UNT Student Help Desk will work with the student to resolve any issues at the earliest possible time.

Assignment Policy

Students are encouraged to complete assignments during lab sections in class, with the help of the instructor, the TA, and their classmates. Unless otherwise specified, assignments are due at midnight exactly one week after they are assigned (allowing for questions in class on the day the assignment is due). Results should be presentable, with appropriate comments for someone to follow what you have

done. Assignments can be done individually or in a group of no more than 3 people, but must be submitted to Canvas individually unless otherwise specified.

Instructor/TA Responsibilities and Feedback

- Instructor responsibilities include: helping students grow and learn, providing clear instructions
 for projects and assessments, answering questions about assignments, identifying additional
 resources as necessary, providing grading rubrics, reviewing and updating course content, etc...
- TA responsibilities include: grading assignments and exams, answering questions about assignments, helping students grow and learn.
- Estimated timeline for feedback:
 - Assignments and exams are graded within a week since submission;
 - Emails are responded within 24 hours during the work week (M-F);
 - Messages on Canvas are not recommended, and might not receive a response.

Syllabus Change Policy

Any substantial changes to the syllabus after the first week will be highlighted in red on the online platform. Approximate point values are expected to vary but will be fixed when the assignment or exam is given.

UNT Policies

Academic Integrity Policy

Academic Integrity Standards and Consequences. According to UNT Policy 06.003 (https://policy.unt.edu/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

The University of North Texas makes reasonable academic accommodation for students with disabilities. Students seeking reasonable accommodation must first register with the Office of Disability Access (ODA) to verify their eligibility. If a disability is verified, the ODA will provide you with a reasonable accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request reasonable accommodations at any time; however, ODA notices of reasonable 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 reasonable accommodation for every semester and must meet with each faculty member prior to implementation in each class. Students are strongly encouraged to deliver letters of reasonable accommodation during faculty office hours or by appointment. Faculty members have the authority to ask students to discuss such letters during their designated office hours to protect the privacy of the student. For additional information, refer to the Office of Disability Access website (https://studentaffairs.unt.edu/office-disability-access). You may also contact ODA by phone at (940) 565-4323.

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 email: 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.

Survivor Advocacy

UNT is committed to providing a safe learning environment free of all forms of sexual misconduct. Federal laws and UNT policies prohibit discrimination on the basis of sex as well as 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. The Survivor Advocates can be reached at SurvivorAdvocate@unt.edu or by calling the Dean of Students Office at 940-5652648.

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 <u>Electronic Code of Federal Regulations website</u> (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 <u>UNT Policy 07-002 Student Identity Verification</u>, <u>Privacy</u>, and <u>Notification and Distance Education</u> <u>Courses</u> (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.

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:

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

Additional Student Support Services

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

Academic Support Services

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

^{*}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.