

ADTA 5340.002 Discovery and Learning with Big Data  
Fall 2025

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## Instructor

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**Lecture Hours:** Wednesday 12:00 – 1:50 pm, Env 110

**Office Hours:** Wednesday, 2:30 – 4:30 pm at Denton campus, Thursday 3:30 – 5:30 pm at FRLD, or by appointment

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**About the Professor:** Dr. Orhan has both his master's and PhD degrees from Bilkent University, Ankara, Turkey. His research interests primarily revolve around data analytics, covering both theoretical foundations and real-world applications. So far, he has been teaching at business schools of SUNY Oneonta, University of Houston-Clear Lake, and Valdosta State University in addition to the University of the West Indies. His theoretical research interests include HCCME estimation, robust estimation techniques, and Bayesian inference. He is interested in testing the capability of theory to handle reality with data.

## Communication

The preferred way to contact me is via email (not the Canvas email tool, emails from your account to Mehmet.Orhan@unt.edu). Emails will be answered as quickly as possible, usually in one business day or less including weekends. When sending an email, **include the course and section you are in as well as the main point of your email in the subject line** so that I can prioritize your message. If I do not respond within one business day, send me a reminder asking for the confirmation that I received your message since student emails are occasionally routed to the junk folder. **Do not email me through Canvas since I faced many cases where the email I replied via Canvas returned to me undelivered.**

**I expect emails to follow professional etiquette standards** as these are formal communications between the instructor and student. If your email is related to a course activity/assignment, attach appropriate files and/or screenshots.

## Course Description (from UNT catalog)

This course introduces the fundamentals of data analytics and machine learning with big data. The goal of this course is to provide students with both theoretical knowledge and practical experience leading to mastery of big data analytics and machine learning (ML), using both small and large datasets. As these fundamentals are introduced, exemplary technologies will illustrate how machine learning can be applied to real-world solutions. The problems are being considered in the context of big data analytics. Exercises and examples will consider both simple and complex data structures and data ranges from clean and structured to dirty and unstructured.

## Course objectives

**Upon successful completion of this course, the learner will be able to:**

1. Develop an understanding of the fundamental concepts of big data and machine learning.
2. Apply Exploratory Data Analysis (EDA) concepts leveraging the Python programming language and the Jupyter Integrated Development Environment (IDE).
3. Develop and articulate results from Supervised and Unsupervised Machine Learning models, including correctly identifying algorithms appropriate for the assigned data set.
4. Develop and articulate results from Supervised and Unsupervised Microsoft Machine Learning Studio models, including correctly identifying algorithms appropriate for the data set.
5. Apply skills and knowledge learned in class to real-world case study problems and develop Machine Learning models to solve problems.

### **Topics included:**

- Python Basics
- Data analytics life cycle
- Data preprocessing
- Exploratory Data Analysis (EDA)
- Overview of big data analytics and ML
- Supervised Algorithms
- Unsupervised Algorithms
- Evaluating Algorithms
- Big data analytics and ML with NumPy, Pandas, and Scikit-Learn in Python

## Course Structure

This is a 16-week on-site class that will cover 14 modules. We will meet in-person every week and the lectures will not be recorded. Besides attending the classes, students are expected to participate in various activities.

## Pre-requisites, Co-requisites, and/or Other Restrictions

None

## Required/Recommended Materials

Textbook (required):

zyBook: ADTA 5340: Discovery and Learning with Big Data

1. Sign in or create an account at [learn.zybooks.com](https://learn.zybooks.com)
2. Enter zyBook code: UNTADTA5340MehmetOrhanFall2025
3. Subscribe

**Important:** You have to subscribe to Section 002 of the course at Denton.

A subscription is **\$89**. Students may begin subscribing on Aug 04, 2025 and the cutoff to subscribe is Nov 28, 2025. Subscriptions will last until Dec 26, 2025.

## Online Access to Course Materials

- This course was developed and will be facilitated utilizing the CANVAS Learning Management System.
- To get started with the course, please visit <https://unt.instructure.com/login/ldap>. You can access student guides on Canvas at this site. You will need your EUID and password to log in to the course. If you do not know your EUID or have forgotten your password, please go to: <https://ams.unt.edu/>
- The Canvas Student app has a mobile version of Canvas that helps students stay current with their courses anywhere.
  - For iOS devices, see: How do I download the Canvas Student app on my iOS device? <https://community.canvaslms.com/docs/DOC-9831-18561185379>.
  - For Android devices, see: How do I download the Canvas Student app on my Android device? <https://community.canvaslms.com/docs/DOC-9758-18555199445>

I will use the CANVAS learning management system to post important announcements, supplementary materials, and grades. You must check CANVAS regularly. You are responsible for being aware of information and content posted to the course website in CANVAS. You are expected to check your UNT email every day, as I will occasionally send emails for important announcements or potential changes in the schedule. Missing an

important email announcement because you do not check your email regularly is not a valid excuse.

## Technology Requirements

This course has digital components. To fully participate in this class, students will need a laptop/computer with a webcam/mic and reliable internet access to reference content on the Canvas Learning Management System as well as Python and Jupyter installed on their device. While students can complete some work on their smartphones, this will not be sufficient in all instances, given the limitations of mobile devices. Hence, access to a computer is essential. Information on how to be successful in a digital learning environment can be found at [Learn Anywhere](https://online.unt.edu/learn) (<https://online.unt.edu/learn>).

### Minimum Technology Requirements

To meet the minimum requirements of this course, you will need the following:

- Computer
- Reliable internet access
- Speakers/microphone/camera/plugin
- Office 365 for access to UNT email and to Microsoft applications that we will use regularly (Outlook, Teams, Word, Excel, PowerPoint, etc.) and Zoom via Canvas
- Python and Jupyter Notebook tools for statistical analysis
- Canvas Technical Requirements (<https://clear.unt.edu/supported-technologies/canvas/requirements>)
- Google Colab

### Computer Skills & Digital Literacy

This course utilizes Python to perform analytics techniques with curriculum delivered on our Canvas platform. You should be able to successfully:

- Use Canvas including uploading and downloading files and posting to discussion boards
- Send email with attachments
- Download and install software
- Use spreadsheet programs
- Use presentation and graphics programs
- Printing Word documents OR opening and printing pdf files, using Adobe Acrobat Reader

## Student Effort

As teaching asks for active contribution of the instructor, learning requires students to be actively involved in the process. Student learning will be futile without considerable time and effort of the learner invested into this course. Students must complete the course requirements every week regularly which includes all class activities like reading the textbook and supplementary resources, completing discussion posts, online quizzes, assignments, and the group project. **Plan carefully to use your time efficiently. Check the deadlines of activities and submit way before the deadline.** Be prepared to face last

minute glitches. Don't hesitate to ask for help and always communicate. Be punctual and save all your assignments/activities continuously (and back them up!)

## Course Requirements

The student will:

1. be responsible for checking the announcements in the UNT email and other types of class communication daily.
2. access and follow all course instructions found in the syllabus, announcements, assignments, and all other class-related documents.
3. complete all the class assignments in the timeframe specified.
4. submit on time. There is no late submission. **The student is supposed to cross-check to make sure that the submission is completed on time and the file submitted is correct.** In case of any technical inconvenience or emergency situation, inform me immediately with adequate documentation.
5. complete and submit the midterm, final exam and final project on time. There will be no deadline extension.

## Assessing Your Work

The course grade will be determined based on the following:

Grade Item	Weight
Class Participation	10%
Discussion Post	3%
Assessment Assignment	25%
Syllabus Quiz	2%
Midterm	15%
Final Project	25%
Final Exam	20%
Bonus	5% (max)

Your letter grade will be determined by the following overall grading scheme

Course Score (%)	Letter Grade
90-100	A
80-89.99	B
70-79.99	C
60-69.99	D
0-59.99	F

### **Class Participation (10% of overall grade)**

Class participation activities will be asked from you to be submitted during lectures regularly every week.

### **Discussion Posts (3% of overall grade)**

The discussion post lets you introduce yourself to class. Your introduction is expected to be thoughtful, respectful, grammatically correct.

### **Syllabus Quiz (2% of overall grade)**

A simple online quiz to be submitted after reviewing the syllabus.

### **Assessment Assignments (25% of overall grade)**

There will be regular assessment assignments throughout the semester that are related to the materials covered. You will gain hands-on experience conducting data analyses usually using the software. Assignments may include questions to be answered about a specific concept, analysis using data sets, interpretation of the results, or questions directly/indirectly related to the course material.

### **Midterm Exam (15% of overall grade)**

Midterm will be around the middle of the semester and it will be open book/notes/slides. The test will cover almost the first half of the material.

### **Final Project (25% of overall grade)**

The final project will give you independent applied research experience by using real data and statistical methods. You will complete the semester-long project in a team of up to five students. You will initiate the project to apply the tools we shall cover throughout the semester. You can benefit from open resources on the web to have an idea about such projects. Then you will acquire the data set of sufficient size to complete your analysis. Your project will have a purpose and a story behind towards that purpose. It will have solid implications underlined in your final report. You will make use of the data analytics to come up with a proper solution to a problem or an answer to a question with appropriate tools. You can use generative AI tools in the final project. Check the instructions if you decide to use them carefully.

**Project Group Members Selection (1% of overall grade):** You will select group members to work with. Maximum group size is five. You may prefer to work alone though I strongly recommend working in groups due to primarily the workload. In addition, one or more of you can leave the group and establish a new group to work on the **same project** by the 10<sup>th</sup> week of the semester, but you have to extend a notice to group members whose performance and dedication you think is not sufficient. You cannot join another group if you decide to leave your group. Both original and spinoff groups will keep on working on the same project.

**Project Proposal and Data Set (2% of overall grade):** You will propose a project and submit your data set. Your project will have a purpose. It may be after finding an answer to a major question, or solving a business problem, but it should not be purposeless (just applying things you learn in the course is not sufficient). You can submit the link of the data set if it is too large to be submitted through Canvas. You must be specific in the variables you use, especially the target variable.

**Python Codes and Outputs (3% of overall grade):** You will submit the Python codes you use to get your analytic results with their outputs. Codes should be ready to run again in a Jupyter notebook as well as the final version of the data set used. Comments to highlight your Python commands should be included in code blocks.

**PowerPoint Slides and the Recorded Presentation (9% of overall grade):** Prepare 10-15 slides introducing your project, key findings of your analysis and recommendations about what action should be taken based on your findings. You will then record your presentation that will last about 10 minutes with cameras on. All members of the group are expected to participate in the recorded presentation. The presentation will be intended for the audience who are not interested in technical aspect of the analysis but rather main advantages it suggests to them.

**Project Report (10% of overall grade):** Write the project report outlining the methodology, key findings of your statistical analysis as well as the suggestions for how your intended audience should make use of your findings. Your project report should include the title, abstract, and names of all group members on the front page as well as the table of contents and bibliography. Your project report should include 4-6 charts.

### Final Exam (20% of overall grade)

Final exam will be at the end of the semester, and it will be open book/notes/slides. The test will roughly include the material covered in the second half of the semester.

### Bonus (at most 5% of overall grade)

You may have chances to gain extra points through various activities.

### Weekly Schedule\*

Week/Date	Modules and Topics	Activities
<b>Week 1</b> (Aug 18 – Aug 24)	<b>Module 1: Introduction</b> <i>Syllabus review</i> <i>Course Basics and Overview</i> <i>Introduction to Data Analytics (zyBook Chapter 1)</i>	<ul style="list-style-type: none"> <li>- Review the syllabus</li> <li>- Acquire the textbook</li> <li>- Review the slides</li> <li>- Read Chapter 1 of zyBook</li> <li>- Syllabus Quiz (Aug 24)</li> <li>- Discussion Post 1: Introduce yourself (Aug 24)</li> <li>- Assessment Assignment 1 (Aug 24)</li> </ul>
<b>Week 2</b> (Aug 25 – Aug 31)	<b>Module 2: Python Primer</b> <i>zyBook Chapter 2</i>	<ul style="list-style-type: none"> <li>- Read Chapter 2</li> <li>- Review Module 2 slides</li> <li>- Assessment Assignment 2 (Aug 31)</li> </ul>
<b>Week 3</b> (Sep 1 – Sep 7)	<b>Module 3: Data Wrangling</b> <i>zyBook Chapter 5</i>	<ul style="list-style-type: none"> <li>- Read Chapter 5</li> <li>- Review Module 3 slides</li> <li>- Assessment Assignment 3 (Sep 7)</li> </ul>

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<b>Week 4</b> (Sep 8 – Sep 14)	<b>Module 4: Data Exploration</b> <i>zyBook Chapter 6</i>	<ul style="list-style-type: none"> <li>- Read Chapter 6</li> <li>- Review Module 4 slides</li> <li>- Select project group members (Sep 14)</li> <li>- Assessment Assignment 4 (Sep 14)</li> </ul>
<b>Week 5</b> (Sep 15 – Sep 21)	<b>Module 5: Regression</b> <i>zyBook Chapter 7</i>	<ul style="list-style-type: none"> <li>- Read Chapter 7</li> <li>- Review Module 5 slides</li> <li>- Assessment Assignment 5 (Sep 21)</li> </ul>
<b>Week 6</b> (Sep 22 – Sep 28)	<b>Module 6: Evaluating Model Performance</b> <i>zyBook Chapter 8</i>	<ul style="list-style-type: none"> <li>- Read Chapter 8</li> <li>- Review Module 6 slides</li> <li>- Assessment Assignment 6 (Sep 28)</li> </ul>
<b>Week 7</b> (Sep 29 – Oct 5)	<b>Module 7: Supervised Learning, KNN</b> <i>zyBook Chapter 9, Sections 9.1 and 9.2</i>	<ul style="list-style-type: none"> <li>- Read Chapter 9</li> <li>- Review Module 7 slides</li> <li>- Assessment Assignment 7 (Oct 5)</li> <li>- Project Proposal and Data Set (Oct 5)</li> </ul>
<b>Week 8</b> (Oct 6 – Oct 12)	<b>MIDTERM</b>	Oct 8, 12 pm
<b>Week 9</b> (Oct 13 – Oct 19)	<b>Module 8: Decision Trees and Random Forests</b> <i>zyBook Chapter 11</i>	<ul style="list-style-type: none"> <li>- Read Chapter 11</li> <li>- Review Module 8 slides</li> <li>- Assessment Assignment 8 (Oct 19)</li> </ul>
<b>Week 10</b> (Oct 20 – Oct 26)	<b>Module 9: Unsupervised Learning: KMeans, Hierarchical Clustering</b> <i>zyBook Chapter 10, Sections 10.2 and 10.3</i>	<ul style="list-style-type: none"> <li>- Read Chapter 10</li> <li>- Review Module 9 slides</li> <li>- Assessment Assignment 9 (Oct 26)</li> </ul>
<b>Week 11</b> (Oct 27 – Nov 2)	<b>Module 10: Unsupervised Learning: Factor Analysis, PCA</b> <i>zyBook Chapter 10, Sections 10.4, 10.5 and 10.6</i>	<ul style="list-style-type: none"> <li>- Read Chapter 10</li> <li>- Review Module 10 slides</li> <li>- Assessment Assignment 10 (Nov 2)</li> </ul>
<b>Week 12</b> (Nov 3 – Nov 9)	<b>Module 11: Artificial Neural Networks</b> <i>zyBook Chapter 12</i>	<ul style="list-style-type: none"> <li>- Read Chapter 12</li> <li>- Review Module 11 slides</li> <li>- Assessment Assignment 11 (Nov 9)</li> </ul>
<b>Week 13</b> (Nov 10 – Nov 16)	<b>Module 12: Artificial Intelligence</b> <i>zyBook Chapter 14</i>	<ul style="list-style-type: none"> <li>- Read Chapter 14</li> <li>- Review Module 12 slides</li> <li>- Assessment Assignment 12 (Nov 16)</li> </ul>
<b>Week 14</b> (Nov 17 – Nov 23)	<b>Module 13: Case Studies</b>	<ul style="list-style-type: none"> <li>- Review Module 13 slides</li> </ul>
<b>Week 15</b> (Nov 24 – Nov 30)	<b>THANKSGIVING BREAK</b>	Happy Thanksgiving 😊
<b>Week 16</b> (Dec 1 – Dec 7)	<b>Module 14: Final Project</b> <i>Project Report &amp; Presentation, Python Codes and Outputs</i>	<ul style="list-style-type: none"> <li>- Python codes and outputs (Dec 4)</li> <li>- Project presentation (Dec 4)</li> <li>- Project report (Dec 4)</li> </ul>
<b>Week 17</b>	<b>Final Exam</b>	- Final (Dec 10, 2025, Wednesday, 10:30 am)

\* Tentative, there may be changes due to unforeseen circumstances

## Technical Assistance

The 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 technical issues.

### UIT Help Desk:

UIT Student Help Desk site (<http://www.unt.edu/helpdesk/index.htm> )

Email: [helpdesk@unt.edu](mailto: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>

## Communication Policies

**Course Announcements:** You must check Canvas every day for important course-related information. It is highly recommended that you adjust your CANVAS account settings to receive essential information directly to your email account or cell phone.

Important course announcements about assignments, exams, grades, and other course information will be posted in the Announcements section on the CANVAS course website throughout the semester. Students are recommended to set up notifications in CANVAS to stay informed of course news and other course updates.

## Diversity Statement

I value the many perspectives students bring to our campus. Please collaborate with me to create a classroom culture of open communication, mutual respect, and inclusion. All discussions should be respectful and civil. Although disagreements and debates are encouraged, personal attacks are unacceptable. Together, we can ensure a safe and welcoming classroom for all. If you ever feel like this is not the case, please let me know. We are all learning together.

## Course Policies

### Late Work Policy

Assignment due dates are posted in the syllabus and on Canvas. Any changes to due dates will be updated on Canvas and communicated in an announcement. All work for this course is due no later than 11:59 pm (Central Time Zone) on the designated date. **No late submission is allowed. You will be given a chance to extend the deadline of one of your submissions from among the discussion post, syllabus quiz, class participation activities, or assessment assignments at the end of the semester.**

The University is committed to providing a reliable online course system to all users. However, in the event of an unexpected server outage or any unusual technical difficulty, which prevents students from completing and submitting 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](mailto: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.

### Attendance

Students are expected to attend class meetings regularly and to abide by the attendance policy established for the course. It is important that you communicate with the professor and the instructional team prior to being absent, so you, the professor, and the instructional team can discuss and mitigate the impact of the absence on your attainment of course learning goals. Please inform the professor and instructional team if you are unable to attend class meetings because you are ill, in mindfulness of the health and safety of everyone in our community.

### Syllabus Change Policy

While the plan is to follow this syllabus as written, it is reasonable to expect that adjustments will be made if necessary due to events that are outside of my control. Any changes will be posted in the Announcement section of Canvas. If these changes affect assignments or due dates, they will be communicated via email as well.

### Turnitin Notice

Turnitin is used as a tool to assist students in their scholarly writing to address plagiarism issues. All works submitted for credit must be original works created by the scholar uniquely for the class. It is considered inappropriate and unethical, particularly at an advanced undergraduate/graduate level, to make duplicate submissions of a single work for credit in multiple classes, unless specifically requested by the instructor. It is also considered inappropriate and unethical to work together on individual assignments or share work that is to be created on an individual level. Work submitted at the senior/graduate level is expected to demonstrate higher-order thinking skills and be of significantly higher quality than work produced at the lower undergraduate levels. It is recommended that students use the Turnitin resource to ensure their work is free of copyright issues prior to the final submission of their projects.

You are expected to follow UNT's Code of Student Conduct which is intended to "foster a safe environment conducive to learning and development. Students and student groups are expected to conduct themselves in a manner that demonstrates respect for the rights and property of others and upholds the integrity and values of the University community." The Code of Student Conduct can be found at [https://policy.unt.edu/sites/default/files/07.012\\_CodeOfStudConduct.Final8\\_19.format.pdf](https://policy.unt.edu/sites/default/files/07.012_CodeOfStudConduct.Final8_19.format.pdf).

You are also expected to follow UNT's Student Academic Integrity Policy. The Student Academic Integrity Policy can be found at <https://policy.unt.edu/sites/default/files/06.003.AcadIntegrity.Final.pdf>

### Policy on the Use of AI Tools

General Use: Students are encouraged to use Artificial Intelligence (AI) tools to improve their learning and practice throughout this course. These tools can help students grasp complex concepts, engage in creative problem-solving, and get additional practice with course-related skills.

Use in Assignments:

- Discussion Assignments: AI tools may be used freely in discussion assignments. Students are not required to attribute the use of AI tools in these contexts, allowing for straightforward integration and experimentation with the technology to deepen understanding and engagement with the course material.
- Graded Homework and Final Project: The use of AI tools is permitted in completing graded homework assignments and the final project. However, students must follow these guidelines:
  - Attribution: Clearly state the use of AI tools in your submissions.
  - Documentation: Include a copy of the prompts used in interactions with AI tools as part of your assignment submission. This transparency is essential to maintain academic integrity and to allow for proper evaluation of your understanding and original contributions. **Citing only AI or ChatGPT is insufficient in any academic writing assignment (e.g., a project report). Students must provide the references used - articles, textbook chapter, etc.**
  - Spell Checking and Grammar Corrections: Students may use AI tools for spell checking and grammar corrections in any written work. **Students are allowed to improve writing originally produced by themselves by using AI tools to edit, paraphrase, and proofread. However, if the percentage attributed to AI by the AI writing detector for a graded assignment is scored high (on the answers) then the work should be reviewed further for a possible plagiarism violation.** It is required that students clearly state:
    - Tools Used: Identify the AI tools utilized for spell checking and grammar corrections.
    - Application: Specify the sections or parts of the assignment where these tools were used. This information should be explicitly stated in the assignment submission.

Exams:

- Midterm and Final Exams: The use of AI tools is strictly prohibited during both the midterm and final exams. These assessments are designed to evaluate individual knowledge and problem-solving skills without the aid of external AI assistance.
  - Policy Violation Consequences: Any student found using AI tools during these exams will be considered in violation of the course's academic integrity policies. Such violations will be reported and may result in disciplinary action in accordance with the university's standards.

Responsibility: Regardless of whether AI tools are used, students are completely responsible for ensuring the authenticity and originality of their work submitted for academic evaluation. This includes a full understanding of the material and the ability to discuss and defend all submitted work, irrespective of the tools used in its creation.

## University Policies

### Course Evaluation

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. 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. Students will receive an email from "UNT SPOT Course Evaluations via System 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](mailto:spot@unt.edu). SPOT responses are anonymous to instructors/administrators, and they will be able to access results only after they have submitted final grades. Before final grade submission, instructors will not be able to see any responses.

### 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 failing from the course to expulsion from the University. The consequences of academic dishonesty are harsh especially after the introduction of generative AI tools. The students are supposed to follow the instructions carefully.**

### 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](http://www.unt.edu/oda) website (<http://www.unt.edu/oda>). You may also contact ODA by phone at (940) 565-4323.

### **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, 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](http://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>)

### 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](mailto: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](mailto:oeo@unt.edu) or at (940) 565 275

### 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](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>).

### 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 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 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 presentation, 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. 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 be reused in future course offerings. If you do not want your image to appear, turn off your camera prior to the start of the recording.

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.

## Class Recordings & Student Likenesses

Synchronous (live) sessions in this course will be recorded for students enrolled in this class section to refer to throughout the semester. Class recordings are the intellectual property of the university or instructor and are reserved for use only by students in this class and only for educational purposes. Students may not post or otherwise share the recordings outside the class, or outside the Canvas Learning Management System, in any form. Failing to follow this restriction is a violation of the UNT Code of Student Conduct and could lead to disciplinary action.

## Grades of Incomplete

Grades of Incomplete will only be given per university policy as outlined by the [Office of the Registrar](#).

## 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://careercenter.unt.edu) (https://careercenter.unt.edu)
- [Multicultural Center](https://idea.unt.edu/multicultural-center) (https://idea.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://idea.unt.edu/pridealliance) (https://idea.unt.edu/pridealliance)
- [UNT Food Pantry](https://studentaffairs.unt.edu/food-pantry) (https://studentaffairs.unt.edu/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 Center](https://writingcenter.unt.edu) (<https://writingcenter.unt.edu>)
- [Math Lab](https://learningcenter.unt.edu/math-lab) (<https://learningcenter.unt.edu/math-lab>)

## Emergency Notification and 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.

## Scholarly Expectations

### Copyright Notice

Some or all the materials on this course web site may be protected by copyright. Federal copyright law prohibits the reproduction, distribution, public performance, or public display of copyrighted materials without the express and written permission of the copyright owner, unless fair use or another exemption under copyright law applies. Additional copyright information may be located at <http://policy.unt.edu/policy/08-001>.

### UNT Code of Student Conduct

Every student in my class can improve by doing their own work and trying their hardest with access to appropriate resources. Students who use other people's work without citations will be violating UNT's Academic Integrity Policy. Please read and follow this important set of [guidelines for your academic success](https://policy.unt.edu/policy/06-003) (<https://policy.unt.edu/policy/06-003>). If you have questions about this, or any UNT policy, please email me or come discuss this with me during my office hours.

You are encouraged to become familiar with the University's Code of Student Conduct and the Policy of Academic Integrity (Links to an external site.) found on the Dean of Students website. The Dean of Students Office (opens in a new window) (Links to an external site.) enforces the Code. The Code explains what conduct is prohibited, the process the DOS uses to review reports of alleged misconduct by students, and the sanctions that can be assigned. When students may have violated the Code, they meet with a representative from the Dean of Students Office to discuss the alleged misconduct in an educational process. The University's expectations for student conduct apply to all instructional forums, including University and electronic classroom, labs, discussion groups, field trips, etc.

Of particular interest are the following terms:

**Cheating** – intentionally using or attempting to use unauthorized materials, information, or study aids in any academic exercise. The term academic

exercise includes all forms of work submitted for credit or hours.

**Plagiarism** – the deliberate adoption or reproduction of ideas, words, or statements of another person as one’s own without acknowledgement.

**Fabrication** – intentional and unauthorized falsification or invention of any information or citation in an academic exercise.

**Facilitating academic dishonesty** – intentionally or knowingly helping or attempting to help another to violate a provision of the institutional code of academic integrity.

The policies contained on the course website apply to this course. In addition, you are expected to adhere to the ADTA Academic Integrity Policy outlined below. If you have questions regarding any of the information presented regarding academic integrity, please feel free to contact me.

### Academic Integrity

All works submitted for credit must be original works created by the scholar uniquely for the class. Use of generative AI tools (like Bard and ChatGPT) is not allowed in this course unless stated otherwise. It is considered inappropriate and unethical, particularly at an advanced graduate level, to make duplicate submissions of a single work for credit in multiple classes, unless specifically requested by the instructor. Work submitted at the graduate level is expected to demonstrate higher order thinking skills and be of significantly higher quality than work produced at the undergraduate level.

### ADTA Academic Integrity Policy

The University of North Texas promotes the integrity of learning and embraces the core values of trust and honesty. Academic integrity is based on educational principles and procedures that protect the rights of all participants in the educational process and validate the legitimacy of degrees awarded by the University. In the investigation and resolution of allegations of student academic dishonesty, the University’s actions are intended to be corrective, educationally sound, fundamentally fair, and based on reliable evidence.

The UNT Student Academic Integrity Policy is found at

<https://policy.unt.edu/policy/06-003>

ADTA students must read and adhere to the university, department, and course Academic Integrity expectations. The consequences of violating Academic Integrity expectations are outlined below.

### Advanced Data Analytics Integrity Policy

	Penalty	Other
1 <sup>st</sup> Academic Integrity Offense	The minimum penalty is a 0 for the assignment AND a deduction of one letter grade from the final grade for the course. Other penalties may be assessed by the course instructor up	All Academic Integrity offenses will be reported to the UNT Academic Integrity Office.

# ADTA 5340.002 Discovery and Learning with Big Data

	to course failure, depending on the severity of the offense.	
2 <sup>nd</sup> Academic Integrity Offense	Suspension from the ADTA program.	A second offense is defined as a separately reported offense either in the same class as the 1 <sup>st</sup> offense or in a different course. Students suspended for a second Academic Integrity violation will not be allowed to enroll in ADTA courses for 1 calendar year. For students who had a single Academic Integrity violation prior to Fall 2023, a second violation will result in suspension from the ADTA program.
3 <sup>rd</sup> Academic Integrity Offense	Dismissal from the ADTA program.	Students committing a 3 <sup>rd</sup> Academic Integrity offense will be dismissed from the program. For students who had multiple Academic Integrity violations prior to Fall 2023, any additional violation will result in dismissal from the ADTA program.