

University of North Texas at Dallas
Syllabus for MATH 1342 - 0071-Elementary Probability and Statistics
FALL 2025 (3 Credit Hrs.)

Department of	Mathematics
Instructor Name	Dr. Vinod Arya
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Virtual Office Hours	M 2-4 pm; W 4-6 pm, F 6-8 pm.
Course Format/Structure	Online
Classroom Location	Online
Class Meeting Days & Times	Online
Course Catalog Description	3 hours (3;0;0). An introductory course to serve students of any field who want to apply statistical inference. Descriptive statistics, elementary probability, estimation, hypothesis testing and small samples. Prerequisite(s): TSI-Math complete; or MATH 1305 (formerly MATH 1010) or MATH 1303 (formerly 1000R) with a grade of C or better; or concurrent enrollment in MATH 1303 (formerly MATH 1000R).
Prerequisites	Math 1010 with grade C or better, or the placement test result appropriate for this course
Corequisites	None
Required Reading	e-Text Book with MyLab Statistics (Required). ISBN for the MyMathLab Access Code: 9780136662105
Recommended Reading & References	Listed in Canvas Module Section.
Access to Learning Resources	UNT Dallas Library: Phone: (972) 338-1616 Website URL: http://www.untDallas.edu/library UNT Dallas Bookstore: Phone: (972) 780-3652 Website URL: http://www.untDallas.edu/bookstore Email: untDallas@bkstr.com
Canvas Resources Supported Browsers: <ul style="list-style-type: none"> • Chrome Supported Devices: <ul style="list-style-type: none"> • iPhone • Android • Chromebook <i>Note: Tablet users can use the Canvas app</i> Screen Readers:	Getting Help with Canvas: Canvas 24/7 Phone Support for Students: 1-833-668-8634 Canvas Help Resources: Canvas Student Guide - https://community.canvaslms.com/docs/DOC-10701 For additional assistance, contact UNT Dallas Digital Learning: DAL1, Room 157 Email: DigitalLearning@UNTDallas.edu

<ul style="list-style-type: none"> • Voiceover (Safari) • JAWS (Internet Explorer) • NVDA (Firefox) <p><i>Note: There is no screen reader support for Canvas in Chrome</i></p> <p>MyMath Lab Help Resource</p>	<p>If you are working with Canvas 24/7 Support to resolve a technical issue, please keep me updated on the troubleshooting progress.</p> <p>If you have a course-related issue (e.g., course content, assignment trouble, quiz difficulties), please contact me during office hours or by email.</p> <p>https://support.pearson.com/getsupport</p>
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Course Overview

Course Goals/Overview:

The goals of this course are as follows:

This course addresses the core objectives of **critical thinking skills, communication, and empirical and quantitative skills.**

Critical Thinking Skills – to include creative thinking, innovation, inquiry, and analysis, evaluation, and synthesis of information.

Communication Skills – to include effective development. Interpretation and expression of ideas through written, oral, and visual communication

Empirical and Quantitative Skills – to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.

Learning Objectives/Outcomes: At the end of this course, students will be able to:

1	Explain the use of data collection and statistics as tools to reach reasonable conclusions.
2	Recognize, examine, and interpret the basic principles of describing and presenting data
3	Compute and interpret empirical and theoretical probabilities using the rules of probabilities and combinatorics
4	Explain the role of probability in statistics.
5	Examine, analyze, and compare various sampling distributions for both discrete and continuous random variables.
6	Describe and compute confidence intervals.
7	Solve linear regression and correlation problems.
8	Perform hypothesis testing using statistical methods.

Tentative Course Outline

This schedule is subject to change by the instructor. Any changes to this schedule will be communicated in class or via class email or Canvas announcement. Additional readings and activities may be added, these will be noted in the Canvas Assignments sections or class announcements.

Week No.	Timeline	Topic	Readings/Activities/Assignments
-	Date	General Class Topics	List of readings, assignments due, etc.

Week No.	Timeline	Topic	Readings/Activities/Assignments
I	8/25/25 to 8/31/25	Canvas navigation. Syllabus Discussion	LockDown Browser and Mandatory Quiz, HW 1.1 – Introduction to the Practice of Statistics
II	9/1/25 to 9/7/25	Observational Studie, Simple Random Sampling, Other effective Sampling Methods	Sections 1.2, 1.3, and 1.4
III	9/8/25 to 9/14/25	Bias in Sampling, Design of Experiments, Organizing and Summarizing Data	Sections 1.5, 1.6, and 2.1
IV	9/15/25 to 9/21/25	Organizing Quantitative Data, Displays of Quantitative Data, Graphical Misrepresentation of Data	Sections 2.2, 2.3, 3.1
V	9/22/25 to 9/28/25	Data Measures of Central Tendency and Dispersion from Grouped Data	Exam I – Chapters I and II – 9/24/25 3.2, 3.3
VI	9/29/25 to 10/5/25	Measures of Position and Outliers, 5-N Summary, Boxplots, Scatter Diagrams	Sections 3.4, 3.5, 4.1
VII	10/6/25 to 10/12/25	Least Squares Regression, Diagnostics on the Least-Squares Line	Mid-Term Exam, Chapters I to III; 10/12/25; Sections 4.2, 4.3
VIII	10/13/25 to 10/19/25	Probability Rules, The Addition Rules, and Complements, Independent and Multiplication Rule	Exam II – Chapters IV (10/19/25); Sections 5.1, 5.2, 5.3
IX	10/20/25 to 10/26/25	Conditional Probability and General Multiplication Rule, Counting Techniques, Binomial Probability Distribution	Sections 5.4, 5.5, 6.2
X	10/27/25 to 11/2/25	Properties and Applications of Normal Distribution, Distribution of Sample Mean	Exam III – Probability (Chapter V, VI); (10/28/25); Sections 7.1, 7.2, 8.1
XI	11/3/25 to 11/9/25	Distribution of Sample Proportion; Estimating the Population Proportion and Population Mean	Sections 8.2, 9.1, 9.2
XII	11/10/25 to 11/16/25	The language of Hypothesis Testing, Hypothesis Test for a Population Mean	Exam IV – Chapter VII, VIII and IX (11/12/25), Sections 10.1,10.2
XIII	11/17/25 to 11/23/25	Hypothesis Test for a Population Mean, Inferences on Two Population Proportions	Sections 10.3, 11.1

Week No.	Timeline	Topic	Readings/Activities/Assignments
XIV	11/24/25 to 11/25/25	Inferences on about two means: Dependent and Independent Samples	Sections 11.2, 11.3 (11/25/25)
XV	12/1/25 to 12/7/25	Review For the Final Exam – All Chapters. (12/3/25 to 12/7/25)	Exam V – Chapter X and XI (12/1/25)
XVI	12/8/25	Comprehensive Final Exam (Chapter I – XI): 12/8/25	

Exams/Tests/Quiz Schedule

Exam	Sections/Chapters Included	Date
I	Chapters I and II	9/24/25
Mid-Term Exam	Chapters I to III	10/12/25
II	Chapters IV	10/19/25
III	Probability (V, VI)	10/28/25
IV	Chapters VII, VIII and IX	11/12/25
V	Chapters X and XI	12/1/25
Comprehensive Final Exam	All Chapters	12/8/25

Course Evaluation Methods

This course will utilize the following activities/instruments to determine student grades and proficiency of the learning outcomes for the course.

- **Discussion Posts:** Individual or group participation through postings on discussions
- **Project:** Work and submit a project on an assigned topic.
- **Quizzes/Tests/Exams:** written tests designed to measure the knowledge and the understanding on the course materials.
- **Homework Assignments**
- **Miscellaneous Assignments**

Grading Matrix:

Instrument	Value (points or percentages)
Projects	10%

Instrument	Value (points or percentages)
Discussions/Course Evaluation/Weekly Reports	10%
Online HW Assignments	25%
Quizzes	15%
Exams (Two) (Mid-term + Final)	40% (15%+25%)
Extra Credit	5%
Total:	105%

Grade Determination:

A = 90% or better

B = 80 – 89 %

C = 70 – 79 %

D = 60 – 69 %

F = less than 60%

Need tutoring services or just some help with a particular assignment? For tutoring that empowers students to achieve success, schedule an appointment with the Learning Commons today at <https://www.untDallas.edu/learning/schedule-appointment/>.

Course-Specific Policies

Online Attendance and Participation Policy:

The University attendance policy is in effect for this course. Class attendance in the Canvas classroom and participation is expected because the class is designed as a shared learning experience, and because essential information not in the textbook will be discussed on the discussion board. Online presence and participation in all class discussions is essential to the integration of course material and your ability to demonstrate proficiency. Attendance for this online or hybrid course is considered when you are logged in and active in Canvas, i.e., posting assignments, taking quizzes, or completing Discussion Boards. To maintain financial aid award eligibility, activity must occur before the census date of the session or term of the course. Refer to [UNT Dallas' Registrar](#) for specific dates. If you are absent/not active in the course shell, it is YOUR responsibility to let the instructor know immediately, upon your return, the reason for your absence if it is to be excused. The university student attendance policy 7.005 will be followed. For details visit <https://untsystem.policytech.com/dotNet/documents/?docid=1347&public=true>.

Assignment Policy:

Homework Assignments: You are expected to submit the Homework Assignments on the due dates. The homework assignments submitted after the initial due date will carry a late submission penalty of 20%.

Quizzes/Tests/Exams: If you missed taking a quiz, test, or exam on the scheduled date for non-emergency reasons, you will be allowed to retake it with a penalty of 30%. **Note that no late submission for the FINAL EXAM will be allowed.**

Final Exam Policy: Final Exam must be taken as scheduled. No makeup final examinations will be allowed except for documented emergencies (See Policy 7.005 Student Attendance at <https://www.untDallas.edu/hr/upol>).

Grades of Incomplete, "I": Grades of Incomplete, "I," will be allowed subject to the university policy. See [Academic Regulations - University of North Texas at Dallas - Modern Campus Catalog™ \(untdallas.edu\)](#)

University Policies and Procedures

Students with Disabilities (ADA Compliance):

The University of North Texas at Dallas makes reasonable academic accommodations for students with disabilities. Students seeking accommodation must first register with the Disabilities Services Office (DSO) to verify their eligibility. If a disability is verified, the DSO will provide you with an accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request accommodation at any time, however, DSO notices of accommodation should be provided as early as possible in the semester to avoid any delays in implementation. Note that a student must obtain a new letter of accommodation for every semester and must meet/communicate with each faculty member prior to implementation in each class. Students are strongly encouraged to deliver letters of 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 see the Disability Services Office website at <http://www.untDallas.edu/disability>. You may also contact them by phone at 972-338-1777; by email at UNTDisability@untDallas.edu on the first floor of the Student Center.

Canvas Instructure Accessibility Statement: University of North Texas at Dallas is committed to ensuring that online and hybrid courses are usable by all students and faculty including those with disabilities. If you encounter any difficulties with technologies, please contact our ITSS Department. To better assist them, you would want to have the operating system, web browser and information on any assistive technology being used. The Canvas Instructure Accessibility Statement is provided at <https://www.canvaslms.com/accessibility>.

NOTE: Additional instructional technology tools, such as Turnitin, Respondus, Panopto, and publisher cartridge content (i.e., MyLab, Pearson, etc.) may NOT be fully ADA compliant. Please contact our Disability Office should you require additional assistance utilizing any of these tools.

Academic Integrity:

Academic integrity is a hallmark of higher education. You are expected to abide by the University's code of Academic Integrity policy. Any person suspected of academic dishonesty (i.e., cheating or plagiarism) will be handled in accordance with the University's policies and procedures. Refer to the UNT Dallas Academic Integrity Policy in the appropriate Catalog at <http://dallascatalog.unt.edu>.

Academic dishonesty includes, but is not limited to, cheating, plagiarizing, fabrication of information or citations, facilitating acts of dishonesty by others, having unauthorized possession of examinations, submitting work of another person or work previously used without informing the instructor, or tampering with the academic work of other students.

Web-based Plagiarism Detection: Please be aware in some courses, students may be required to submit written assignments to Turnitin, a web-based plagiarism detection service, or another method. If submitting to Turnitin, please remove your title page and other personal information.

Classroom etiquette:

Students are encouraged to contribute their perspectives and insights to class discussions. However, offensive & inappropriate language (swearing) and remarks offensive to others of nationalities, ethnic groups, sexual orientations, religious groups, genders, or other ascribed statuses will not be tolerated. Disruptions which violate the Code of Student's Rights, Responsibilities, and Conduct will be referred to the Dean of Students as the instructor deems appropriate (UNT Policy 7.001 found at <https://untsystem.policytech.com/dotNet/documents/?docid=1278&public=true>).

Classroom Disruption:

Students are expected to always engage with the instructor and other students in this class in a respectful and civil manner to promote a classroom environment that is conducive to teaching and learning. Students who engage in disruptive behavior will be directed to leave the classroom. A student who is directed to leave class due to disruptive behavior is not permitted to return to class until the student meets with a representative from the Dean of Students Office. It is the student's responsibility to meet with the Dean of Students before class meets again and to provide the instructor confirmation of the meeting. A student who is directed to leave class will be assigned an unexcused absence for that class period and any other classes the student misses because of not meeting with the Dean of Students. The student is responsible for material missed during all absences, and the instructor is not responsible for providing missed material. In addition, the student will be assigned a failing grade for assignments, quizzes or examinations missed and will not be allowed to make up the work.

The Code of Student's Rights, Responsibilities, and Conduct (UNT Policy 7.001 found at <https://untsystem.policytech.com/dotNet/documents/?docid=1278&public=true>) describes disruption as the obstructing or interfering with university functions or activity, including any behavior that interferes with students, faculty, or staff access to an appropriate educational environment. Examples of disruptive behavior that may result in a student being directed to leave the classroom include but are not limited to: failure to comply with reasonable directive of University officials, action or combination of actions that unreasonably interfere with, hinder, obstruct, or prevents the right of others to freely participate, threatening, assaulting, or causing harm to oneself or to another, uttering any words or performing any acts that cause physical injury, or threaten any individual, or interfere with any individual's rightful actions, and harassment. You are encouraged to read the Code of Student's Rights, Responsibilities, and Conduct for more information related to behaviors that could be considered disruptive.

Course Evaluations:

Student evaluations of teaching effectiveness are a requirement for all organized classes at UNT Dallas. This short survey will be made available to you at the end of the semester via your campus email, providing you a chance to comment on how this class is taught. I (as the instructor) will not have access to the results of the evaluations until after final grades have been posted. I am very interested in the feedback I get from students, as I work to continually improve my teaching. I consider students' evaluations to be an important part of your participation in this class.

Sexual Harassment, Sexual Misconduct, Intimate Partner Violence and Stalking

UNT Dallas is committed to creating a safe learning environment for all members of our community, free from gender and sex-based discrimination, including sexual harassment, domestic and dating violence, sexual assault, and stalking, in accordance with Title IX, Texas laws and University Policies. Please note that all employees are mandated reporters and must report all instances of sexual misconduct, dating violence, sexual assault, domestic violence and stalking to the Title IX Coordinator. If you or someone you know has experienced any form of sex or gender-based discrimination or violence and wish to speak to the Title IX Coordinator, you can email them at titleix@untdallas.edu or file a report [here](#).

Pregnancy, Pregnancy Related Conditions and Parenting Modifications Under Title IX

UNT Dallas is committed to compliance with Title IX, and to supporting the academic success of pregnant and parenting students and students with pregnancy related conditions. If you are a pregnant, have pregnant related conditions or a parenting student (child under one-year needs documented medical care) who wishes to request reasonable related modifications from the University under Title IX, please email the Title IX Coordinator at titleix@untDallas.edu. The Title IX Coordinator will work with your professors and academic unit to provide reasonable modifications needed to be supportive of your education while pregnant or as a parent under Title IX.

Bad Weather Policy:

Campus facilities will close, and operations will be suspended when adverse weather and/or safety hazards exist on the UNTD campus or if travel to the campus is deemed dangerous as the result of ice, sleet, or snow. In the event of a campus closure, the Marketing and Communication Department will report closure information to all appropriate major media by 7 a.m. That department will also update the UNTD website, Facebook, and Twitter with closing information as soon as it is possible. For more information, please refer to <http://www.untDallas.edu/police/resources/notifications>.

Inclement Weather and Online Classes:

Online classes may or may not be affected by campus closures due to inclement weather. Unless otherwise notified by your instructor via e-mail, online messaging, or online announcement, students should assume that assignments are due as scheduled.

Diversity/Tolerance Policy:

Students are encouraged to contribute their perspectives and insights to class discussions in the online environment. However, offensive & inappropriate language (swearing) and remarks offensive to others of nationalities, ethnic groups, sexual orientations, religious groups, genders, or other ascribed statuses will not be tolerated. Disruptions which violate the Code of Student Conduct will be referred to the Dean of Students as the instructor deems appropriate.

Technology Assistance: To successfully access the materials in Canvas, UNT Dallas advises that your computer be equipped with the minimum system requirements listed on the first page of the syllabus. If you have trouble accessing or using components of the course, try using Google Chrome browser. If you still experience technical difficulties, first, notify your instructor.

If the problem is still not resolved, either e-mail DigitalLearning@UNTDallas.edu or use the "Help" button in Canvas in the left/global navigation to live chat with support 24/7. Also, no matter what browser you use, always enable popups.

For more information see:

- UNT Dallas Canvas Technical Requirements: <https://community.canvaslms.com/docs/DOC-10721>
- Canvas Instructure Support & Unsupported Operating Systems: <https://community.canvaslms.com/docs/DOC-10720>

Important Dates: Please visit Registrar's Website (untDallas.edu/registrar).