University of North Texas at Dallas
Spring 2025
Syllabus

MATH 3361– 0001: Applied Statistics (3hr)			
Department of	Mathematics	**School of**	Liberal Arts and Sciences
Instructor Name:	Mary Hoyt		
Office Location:	FH 203		
Office Phone:	972 – 338 – 1338		
Email Address:	mary.hoyt@untdallas.edu		
Office Hours:	Tuesday/Thursday 8:00-8:30 am and 11:30 am -1:00 pm Or by appointment		
Classroom Location:	DAL 1 Room 322		
Class Meeting Days & Times:	Tuesday/Thursday 1:00 -2:20 pm		
Course Catalog Description:	Descriptive statistics, elements of probability, random variables, confidence intervals, hypothesis testing, regression, contingency tables.		
Prerequisites:	MATH2413 (CALCULUS 1) with a grade of C or better.		
Required Text:	• J. Devore, Probability and Statistics for the engineering and the sciences, 9th edition, Cengage, 2016, ISBN-13: 978-1305251809.		
Access to Learning Resources:	**UNT Dallas Library:** phone: (972) 780-1616 UNTD Library Webpage email: library@untdallas.edu	**UNT Dallas Bookstore:** phone: (972) 780-3652 UNTD Bookstore Webpage e-mail: untdallas@bkstr.com	
Supported Browsers: Chrome Firefox Flash 28, 29 (for audio/video) Internet Explorer 11 Safari 10, 11 **Supported Devices:** iPhone Android Chromebook (Tablet users can use the Canvas app)	**Getting Help with Canvas:** **Canvas 24 /7 Phone Support for Students:** 1-833-668-8634 **Canvas Help Resources:** web: https://community.canvaslms.com/docs/DOC-10701 **For additional assistance, contact Distance Learning:** DAL1, Ste 150 email: distancelearning@untdallas.edu ***If you are working with Canvas 24/7 Support to resolve a technical issue, make sure to keep me updated on the troubleshooting progress.*** **If you have a course-related issue (course content, assignment troubles, quiz difficulties) please contact me during office hours or by email.**		
Course Goals or Overview: The goals of this course are as follows:			
1	**Critical Thinking Skills** – to include thinking, innovation, inquiry, and analysis, evaluation and synthesis of information.		
2	**Communication Skills** – to include effective development, interpretation & expression of ideas through written, oral and visual communication.		

3	**Empirical and Quantitative Skills** – to include the manipulation and analysis of numerical data or observable facts in informed conclusions
Learning Objectives/Outcomes: At the end of this course, students will be able to:	
1	Think critically and creatively to set up and solve mathematical problems in elementary mathematical statistics
2	Communicate in mathematical phrases and sentences with correct mathematical grammar.
3	Apply critical thinking skills to set up and solve empirical problems in elementary mathematical statistics.

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.

Week	Date	Topics
1	1/13	Syllabus Review, 1.2 Populations and Samples
		1.3 Pictorial & Tabular Methods
2	1/20	1.3 & 1.4 Measures of Location and Variability
	1/22	2.1 & 2.2 Sample Spaces and Properties of Probability
3	1/27	2.3 Counting Techniques
	1/29	2.4 & 2.5 Conditional Probability and Independence
4	2/3	3.1 & 3.2 Random Variables and Probability Distributions
	2/5	3.3 Expected Value
5	2/10	Review
	2/12	Test 1
6	2/17	3.4 Binomial Probability Distribution
	2/19	3.6 Poisson Probability Distribution
7	2/24	4.1 Probability Density Functions
	2/26	4.2 Cumulative Distribution Functions
8	3/3	4.3 Normal Distribution
	3/5	7.1 Confidence Intervals
SB		*SPRING BREAK MARCH 10-14*
9	3/17	7.2 Large-Sample Confidence Intervals
	3/19	7.3 Intervals Based on Normal Population Distribution
10	3/24	Review
	3/26	Test 2
11	3/31	8.1 Hypothesis Test and Procedures
	4/1	8.2 z Tests
12	4/7	8.3 t Tests
	4/9	9.1 z Tests and Confidence Intervals
13	4/14	9.2 Two-Sample t test
	4/16	9.3 Analysis of Paired Data
14	4/21	12.1 Linear Regression

	4/24	12.2 Estimating Model Parameters
15	4/28	Review
	4/30	Review
FX	**5/6**	**Final 1:00 – 3: 00 pm**

Course Evaluation Methods

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

Participation

Attendance and participation in class is required. Failing to attend class, being excessively tardy or leaving early without permission, being inattentive to the day's activities, etc., will result in a loss of credit towards participation. Participation includes being present, engaging in class, participating in classroom activities, etc. Some class activities will be collected for a grade.

Homework

Course homework will be posted in Canvas. Assignments are due by the deadline. Late assignments will be accepted with a penalty of 10% per day. After 5 days homework will no longer be accepted. Any work not completed by the deadline will receive a 0 for a grade. Homework will be submitted to Canvas for grading. Please be neat, any illegible submission will be given a 0.

Exams

You will be given 3 exams throughout the semester. These exams will be semi-comprehensive in nature; that is, there may be some material from older exams on the current exam, but the focus will be on the new material. The exams will be administered in class and will be in a short-answer format. You are permitted a 4"x6" notecard and a graphing calculator on the exam. All work must be shown to receive credit.

Project

You will complete a project during this semester. The project is completed in parts with one-part building upon the previous. This project will be completed with a group of two or three of your classmates. Each project part is due by the deadline. Late submissions will not be allowed. More details will be posted on Canvas.

Grading Matrix

Assignments	**Percentage**
Project	20%
Homework	20%
Class Work/Participation	10%
Exams	50%
Total	100%

Grade Determination

A = 90+% B = 80 – 89 % C = 70 – 79 % D = 60 – 69 % F = 59-%

University Policies and Procedures

Students with Disabilities (ADA Compliance):

Chapter 7(7.004) Disability Accommodations for Students:
The University of North Texas at Dallas makes reasonable academic accommodation for students with disabilities. Students seeking accommodations must first register with the Disability 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 accommodations at any time, however, DSO notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet/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. You may also contact them by phone at 972-338-1777; by email at UNTDdisability@untdallas.edu or in the Student Center Building, 1st floor.

Canvas Instructure Accessibility Statement:
University of North Texas at Dallas is committed to ensuring its 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. Canvas Instructure Course Management System's Accessibility Statement is also provided.

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.

Course Evaluation Policy:
Student's evaluations of teaching effectiveness is a requirement for all organized classes at UNT Dallas. This short survey will be made available to you at the end of the semester, providing you a chance to comment on how this class is taught. 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.

Assignment Policy: (According to the instructor's discretion while working in concert with the division/program's guidelines).

Exam Policy: (Online exams and the ability to retake is solely at the instructor's discretion). NOTE: Online exams may be proctored on campus per instructor's discretion.

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 in the Student Code of Academic Integrity Code 7.002 for complete provisions of this code.

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 online or hybrid 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 Policies

Online Attendance and Participation:

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 in 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 Registrar's Office 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. All instructors must follow university policy 7.005 covering excused absences; however, it is the instructor's discretion, as outlined in the course syllabus, of how unexcused absences may or may not count against successful completion of the course.

Inclement Weather and Online Classes: Online classes may or may not be effected 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.

Online "Netiquette":
In any social interaction, certain rules of etiquette are expected and contribute to more enjoyable and productive communication. Emails, discussion board forum threads and/or any other forms of written communication in the online environment should use proper "netiquette" (i.e., no writing in all caps (usually denotes yelling), no curse words, and no "flaming" messages (angry, personal attacks).

Racial, ethnic, or gender slurs will not be tolerated, nor will pornography of any kind.

Any violation of online netiquette may result in a loss of points or removal from the course and referral to the Dean of Students, including warnings and other sanctions in accordance with the University's policies and procedures. Refer to the Student Code of Student Rights Responsibilities and Conduct Code 7.001. Respect is a given principle in all online communication. Therefore, please be sure to proofread all of your written communication prior to submission.

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 particular nationalities, ethnic groups, sexual preferences, 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: In order to successfully access the materials in an online or hybrid course, UNT Dallas advises that your computer be equipped with the minimum system requirements listed on the first page of the syllabus.

If you experience difficulty 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, call Canvas 24/7 Help Desk at the phone number listed on the first page of the syllabus. Also, no matter what browser you use, always enable pop-ups. For more information see Canvas Student Guide. - `