GENB 2300.060 – Business Statistics
Course Syllabus – Online, Spring 2025

Contact Information

Instructor:	Dr. Elizabeth (Liz) Nesuda
Optional Zoom Meetings:	Mondays 7:00pm – 8:00pm
Office Hours:	By appointment. Please email to make an appointment.
Email:	enesuda@uttyler.edu
Zoom:	https://uttyler.zoom.us/my/lnesuda
Preferred Contact Method:	Canvas Email for personal issues. Canvas Discussion Board for non-personal issues.

Credit Hours

3 semester hours

Required Materials

- **Textbook:** Camm, J. D., Cochran, J. J., Fry, M. J., & Ohlmann, J. W. (2020). Business analytics (4th edition). Cengage Learning
- **Required Software:** Access to Microsoft Excel
- Webcam and microphone access for ProctorU utilization during exams. For additional information, please visit www.uttyler.edu/digital-learning/proctoru-resources/

Course Description

Descriptive and inferential statistical techniques for business and economic decision making. Topics include the collection, description, analysis, and summarization of data; probability; discrete and continuous random variables; the binomial and normal distributions; sampling distributions; tests of hypotheses; estimation and confidence intervals; linear regression; and correlation analysis. Statistical software is used to analyze data throughout the course.

Course Objectives

1. Describe the random processes underlying statistical studies.
2. Calculate and use probability in solving business problems.
3. Compute and interpret descriptive statistics.
4. Compute and interpret measures of central tendency and dispersion.
5. Calculate expected values to evaluate multiple outcomes of a decision.
6. Describe, interpret, and apply discrete and continuous probability distributions.
7. Construct and interpret confidence intervals for means and proportions.
8. Formulate, perform, and interpret hypothesis tests (one and two population parameters).
9. Calculate, evaluate, and interpret simple linear correlation/regression.
10. Use statistical software to graph, compute, and analyze statistical data.

Tentative Class schedule – _All assignments are located in Canvas._

Week	Readings	Topics	Critical Business Applications	Assignments
1	Ch. One – Introduction	• Introduction to the class – application of statistical methods to business applications. • Review skills and knowledge that were covered in prerequisite courses.	• Application of statistical methods to business applications.	• DB (5 pts) • Quiz (10 pts) • Syllabus Quiz – Bonus Opportunity (5 pts) **Due Jan. 18, 2025**
2-3	Ch. Two – Descriptive Statistics	• Compute and interpret descriptive statistics. • Topics include modifying data in Excel, creating distributions from data, measures of location, measures of variability, analyzing distributions, measures of association between two variables, & data cleansing.	• Application for managerial decision making in finance, operations and other business disciplines.	• DB – Part I (5 pts) **Due Jan. 25, 2025** • DB – Part II (5 pts) • Excel Assignment (25 pts) • Quiz (15 pts) **Due Feb. 1, 2025**
4	Ch. Three – Data Visualization	• Use statistical software to graph, compute, and analyze statistical data. • Topics include overview of data visualization, charts, advanced data visualization, & data dashboards.	• Application in sales, finance, marketing and management; while inferring decision from data visualization.	• DB – (5 pts) • Excel Assignment (20 pts) • Quiz (10 pts) **Due Feb. 8, 2025**
5-6	Ch. Four – Probability: An Introduction to Modeling Uncertainty	• Describe, interpret, and apply discrete and continuous probability distributions. • Calculate and use probability in solving business problems. • Calculate expected values to evaluate multiple outcomes of a decision.	• Creating a stock portfolio. • Calculating payoffs to make optimal decision.	• DB – Part I (5 pts) **Feb. 15, 2025** • DB – Part II (5 pts) • Excel Assignment (20 pts) • Quiz (15 pts) **Feb. 22. 2025**
7-8	Study Week Mid-Term Exam	• Study & Mid-Term Weeks	• Prepare & Complete Mid-Term Exam	• Mid-Term Exam (100 pts) **Mar. 8, 2025**

9-11	Ch. Six – Statistical Inference
	
	(Spring Break: Mar. 16, 2025 – Mar. 22, 2025)
		• Construct and interpret confidence intervals for means and proportions.
		• Topics include selecting a sample, point estimation, & sampling distributions.
		• Formulate, perform, and interpret hypothesis tests (one and two population parameters).
		• Topics include developing null and alternative hypotheses, type I and II errors, hypothesis test of the population means, hypothesis test of the population proportion.
			• Applying concept of probability for statistical process control.
			• Decision making on population characteristics from sample.
				• DB – Part I (5 pts)
				
				  Mar. 15, 2025
				
				• DB – Part II (5 pts)
				
				  Mar. 29, 2025
				
				• DB – Part III (5 pts)
				• Excel Assignment (25 pts)
				• Quiz (15 pts)
				
				  Apr. 5, 2025

12-13	Ch. Seven – Linear Regression	• Calculate, evaluate, and interpret simple linear correlation / regression.
		• Topics include the simple linear regression model, least squares method, assessing the fit of the simple linear regression model.
		• Note: Focus is on business implications of results.
		• Topics include the multiple regression model, inference and regression, categorical independent variables, modeling non-linear relationships, model fitting, big data and regression.
		• Prediction with regression / predictive modeling.
			• Learning the tools of predictive modeling.
			• Understanding the proper application and interpretation of the results for decision making in business.
				• DB – Part I (5 pts)
				
				  Apr. 12, 2025
				
				• DB – Part II (5 pt)
				• Excel Assignment (25 pts)
				• Quiz (15 pts)
				
				  Apr. 19, 2025

14-15	Study Week Final Exam	• Study & Final Weeks	• Prepare & Complete Final Exam	• Final Exam (100 pts) **May 3, 2025**

Note. **Semester: January 13, 2025 – May 03, 2025. All assignments are located in Canvas.** Assignments are due Saturday by Midnight. Bonus points are only awarded if all other module work (e.g., quiz, assignments) has been completed and/or submitted and is not late. Additional Bonus point opportunities may be added throughout the course. **Late work is not accepted and will result in a zero.**

Week	Dates	Module	Excel Assignment	Quiz	Exams	Discussion Board (DB)	Bonus
1	01/13 – 01/18	Chapter One: Introduction		**10 pts** (01/18)		**5 pts** (01/18)	**5 pts** (01/18)
2	01/19 – 01/25	Chapter Two: Descriptive Statistics I				**5 pts** (01/25)	
3	01/26 – 02/01	Chapter Two: Descriptive Statistics II	**25 pts** (02/01)	**15 pts** (02/01)		**5 pts** (02/01)	
4	02/02 – 02/08	Chapter Three: Data Visualization	**20 pts** (02/08)	**10 pts** (02/08)		**5 pts** (02/08)	
5	02/09 – 02/15	Chapter Four: Probability I				**5 pts** (02/15)	
6	02/16 – 02/22	Chapter Four: Probability II	**20 pts** (02/22)	**15 pts** (02/22)		**5 pts** (02/22)	
7	02/23 – 03/01	Study Week					
8	03/02 – 03/08	Mid-Term Exam: Chapters One – Four			**100 pts** (03/08)		
9	03/09 – 03/15	Chapter Six: Statistical Inference I				**5 pts** (03/15)	
	03/16 – 03/22	SPRING BREAK					
10	03/23 – 03/29	Chapter Six: Statistical Inference II				**5 pts** (03/29)	
11	03/30 – 04/05	Chapter Six: Statistical Inference III	**25 pts** (04/05)	**15 pts** (04/05)		**5 pts** (04/05)	
12	04/06 – 04/12	Chapter Seven: Linear Regression I				**5 pts** (04/12)	
13	04/13 – 04/19	Chapter Seven: Linear Regression II	**25 pts** (04/19)	**15 pts** (04/19)		**5 pts** (04/19)	
14	04/20 – 04/26	Study Week					
15	04/27 – 05/03	Final Exam: Chapters Four, Six, & Seven			**100 pts** (05/03)		
	Total	**% (Percentages) to Total**	**25% of Total**	**20% of Total**	**20% (Mid-Term) 30% (Final)**	**5% of Total**	

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Graded Course Requirements

Letter grades will be assigned based on the scale provided. Grades will not be rounded beyond that stated below. Students are responsible for verifying that all electronic submissions are correctly uploaded. All scores will be based on what is submitted by the deadline. The possible points for each assignment are as follows:

Grade Composition:

Component (Total %)	Deliverables	Percentage
Weekly Activity (5%)	Discussion Boards	5%
Chapter Assignments (45%)	Excel Assignment	25%
	Quiz	20%
Exams (50%)	Mid-Term Exam	20%
	Final Exam	30%
Total		100%

Weekly Activity (5% of grade):

1. **Discussion Boards (5%):** Students should provide their own thoughts on the weekly discussion topic on Canvas by 11:59pm, every Saturday. Students should make a grammatically correct post containing at least four sentences, which will be evaluated on each post's uniqueness, critical thinking, and contribution. ==Late work is not accepted and will result in a zero.==

Chapter Assignments & Quizzes (45% of grade): Chapter assignments include excel assignments and quizzes for each chapter.

1. **Excel Assignment (25%):** Excel Assignment problems are designed to help students mainly learn quantitative tools and understand business analytics deeply (**Due Saturday by Midnight**). ==Late work is not accepted and will result in a zero.==
   a. You are required to turn in all assignments (Excel files) on Canvas. The guideline/template for assignments will be provided on Canvas. Please make sure to upload an appropriate Excel file (.xlsx or .xls).
   b. *Note*: An Excel file whose name starts with"-$" is a temporary file created by Excel when you open a workbook. Do not upload the temporary file that cannot be read in the grading system**.**
   c. If you show the right process to solve each question, you can expect to have partial points, although you provide wrong answers. Without showing your process in Excel, you will not get full credit even though you provided a correct answer.

    d. Ungraded practice problems/solutions will be provided to help students understand homework problems.

2. **Quiz (20%):** Students' learning will be also assessed by quizzes (**Due Saturday by Midnight**). Quizzes will be open book. Two attempts at each chapter quiz, where you receive the highest grade of the attempts made.

Exams (50% of grade):

1. There will be two exams, the Mid-Term Exam (20%) and the Final Exam (30%), using the ProctorU Extension. The exams will be in multiple choice and true/false formats. The exams will be open book including e-books and excel sheets. However, it will be timed so it is important to prepare for them properly and in a timely manner. ==**Late work is not accepted and will result in a zero.**==

Grading Policy:

Grade A: 90% and above
Grade B: 80% - 89%
Grade C: 70% - 79%
Grade D: 60% - 69%
Grade F: Below 60%

Grading Philosophy

I understand that the process of receiving grades can inhibit the learning process. I endeavor to create a safe learning environment. As part of that environment, you have several opportunities to maintain a high grade in the course, including:
• Two attempts at each chapter quiz, where you receive the highest grade of the attempts made.
• Unlimited attempts at each chapter homework assignment, the last submitted will be graded.

Course Policies:

Class Meeting Attendance
Attendance at all online class sessions is expected for the accomplishment of course objectives. The facilitator recognizes that learners may have special issues and responsibilities that may impact attendance, however regular attendance is expected. If absences occur, the learner is responsible for contacting the facilitator in advance so that adjustments can be made to the instructional activities planned for a specific session. The learner is also responsible for all work that is missed due to the absence from any class meeting, or portion thereof.

Late Work

No credit will be given for late assignments unless the learner's provider and/or UT Tyler's system prevents the student from submitting a discussion post, assignment, quiz, or exam. The student is responsible for contacting the instructor, providing evidence of the outage and submitting any missed work within 24 hours of resolution of any system outage.

Academic Dishonesty Statement

The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, it is imperative that a student demonstrates a high standard of individual honor in his or her scholastic work.

Scholastic dishonesty includes, but is not limited to, statements, acts or omissions related to applications for enrollment of the award of a degree, and/or the submission, as one's own work of material that is not one's own. As a general rule, scholastic dishonesty involves one of the following acts: cheating, plagiarism, collusion and/or falsifying academic records. Students suspected of academic dishonesty are subject to disciplinary proceedings.

University regulations require the instructor to report all suspected cases of academic dishonesty to the Dean of Students for disciplinary action. In the event disciplinary measures are imposed on the student, it becomes part of the students' official school records. Also, please note that the handbook obligates you to report all observed cases of academic dishonesty to the instructor.

Plagiarism will not be tolerated and learners should be aware that all written course assignments will be checked by Plagiarism detection software. Violations of academic integrity will be reported and processed according the guidelines established by the University.

<u>University Policies:</u>

The University of Texas at Tyler Honor Code

Every member of the UT Tyler community joins together to embrace: Honor and integrity that will not allow me to lie, cheat, or steal, nor to accept the actions of those who do.

Students Rights and Responsibilities

To know and understand the policies that affect your rights and responsibilities as a student at UT Tyler, please follow this link: https://www.uttyler.edu/wellness/rightsresponsibilities.php

Campus Carry

We respect the right and privacy of students who are duly licensed to carry concealed weapons in this class. License holders are expected to behave responsibly and keep a handgun secure and concealed. More information is available at http://www.uttyler.edu/about/campus-carry/index.php

UT Tyler a Tobacco-Free University

• All forms of tobacco will not be permitted on the UT Tyler main campus, branch campuses,

and any property owned by UT Tyler. This applies to all members of the University community, including students, faculty, staff, University affiliates, contractors, and visitors.

• Forms of tobacco not permitted include cigarettes, cigars, pipes, water pipes (hookah), bidis, kreteks, electronic cigarettes, smokeless tobacco, snuff, chewing tobacco, and all other tobacco products.

• There are several cessation programs available to students looking to quit smoking, including counseling, quitlines, and group support. For more information on cessation programs please visit www.uttyler.edu/tobacco-free.

Grade Replacement/Forgiveness
Students repeating a course for grade forgiveness (grade replacement) must file a Grade Replacement Contract with the Enrollment Services Center (ADM 230) on or before the Census Date of the semester in which the course will be repeated. (For Spring, the Census Date is Jan. 28.) Grade Replacement Contracts are available in the Enrollment Services Center or at http://www.uttyler.edu/registrar. Each semester's Census Date can be found on the Contract itself, on the Academic Calendar, or in the information pamphlets published each semester by the Office of the Registrar.

Census Date Policies
The Census Date (January 27) is the deadline for many forms and enrollment actions that students need to be aware of. These include:

• Submitting Grade Replacement Contracts, Transient Forms, requests to withhold directory information, approvals for taking courses as Audit, Pass/Fail, or Credit/No Credit.

• Receiving 100% refunds for partial withdrawals. (There is no refund for these after the Census Date).

• Schedule adjustments (section changes, adding a new class, dropping without a "W" grade)

• Being reinstated or re-enrolled in classes after being dropped for non-payment.

• Completing the process for tuition exemptions or waivers through Financial Aid.

State-Mandated Course Drop Policy
Texas law prohibits a student who began college for the first time in Fall 2007 or thereafter from dropping more than six courses during their entire undergraduate career. This includes courses dropped at another 2-year or 4-year Texas public college or university. For purposes of this rule, a dropped course is any course that is dropped after the census date (See Academic Calendar for the specific date).

Exceptions to the 6-drop rule may be found in the catalog. Petitions for exemptions must be submitted to the Enrollment Services Center and must be accompanied by documentation of the extenuating circumstance. Please contact the Enrollment Services Center if you have any questions.

Disability Services
In accordance with Section 504 of the Rehabilitation Act, Americans with Disabilities Act (ADA) and the ADA Amendments Act (ADAAA) the University offers accommodations to

students with learning, physical and/or psychiatric disabilities. If you have a disability, including non-visible disabilities such as chronic diseases, learning disabilities, head injury, PTSD or ADHD, or you have a history of modifications or accommodations in a previous educational environment you are encouraged to contact the Student Accessibility and Resources office and schedule an interview with the Accessibility Case Manager/ADA Coordinator, Cynthia Lowery Staples. If you are unsure if the above criteria applies to you, but have questions or concerns please contact the SAR office. For more information or to set up an appointment please visit the SAR office located in the University Center, Room 3150 or call 903.566.7079. You may also send an email to cstaples@uttyler.edu.

Student Absence due to Religious Observance
Students who anticipate being absent from class due to a religious observance are requested to inform the instructor of such absences by the second class meeting of the semester.

Student Absence for University-Sponsored Events and Activities
If you intend to be absent for a university-sponsored event or activity, you (or the event sponsor) must notify the instructor at least two weeks prior to the date of the planned absence. At that time the instructor will set a date and time when make-up assignments will be completed.

Social Security and FERPA Statement
It is the policy of The University of Texas at Tyler to protect the confidential nature of social security numbers. The University has changed its computer programming so that all students have an identification number. The electronic transmission of grades (e.g., via e-mail) risks violation of the Family Educational Rights and Privacy Act; grades will not be transmitted electronically.

Emergency Exits and Evacuation
Everyone is required to exit the building when a fire alarm goes off. Follow your instructor's directions regarding the appropriate exit. If you require assistance during an evacuation, inform your instructor in the first week of class. Do not re-enter the building unless given permission by University Police, Fire department, or Fire Prevention Services.

Student Standards of Academic Conduct
Disciplinary proceedings may be initiated against any student who engages in scholastic dishonesty, including, but not limited to, cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts.

i.   "Cheating" includes, but is not limited to:
   - copying from another student's test paper;
   - using, during a test, materials not authorized by the person giving the test;
   - failure to comply with instructions given by the person administering the test;
   - possession during a test of materials which are not authorized by the person giving the

test, such as class notes or specifically designed "crib notes". The presence of textbooks constitutes a violation if they have been specifically prohibited by the person administering the test;

- using, buying, stealing, transporting, or soliciting in whole or part the contents of an unadministered test, test key, homework solution, or computer program;
- collaborating with or seeking aid from another student during a test or other assignment without authority;
- discussing the contents of an examination with another student who will take the examination;
- divulging the contents of an examination, for the purpose of preserving questions for use by another, when the instructors has designated that the examination is not to be removed from the examination room or not to be returned or to be kept by the student;
- substituting for another person, or permitting another person to substitute for oneself to take a course, a test, or any course-related assignment;
- paying or offering money or other valuable thing to, or coercing another person to obtain an unadministered test, test key, homework solution, or computer program or information about an unadministered test, test key, home solution or computer program;
- falsifying research data, laboratory reports, and/or other academic work offered for credit;
- taking, keeping, misplacing, or damaging the property of The University of Texas at Tyler, or of another, if the student knows or reasonably should know that an unfair academic advantage would be gained by such conduct; and
- misrepresenting facts, including providing false grades or resumes, for the purpose of obtaining an academic or financial benefit or injuring another student academically or financially.

ii.   "Plagiarism" includes, but is not limited to, the appropriation, buying, receiving as a gift, or obtaining by any means another's work and the submission of it as one's own academic work offered for credit.

iii.   "Collusion" includes, but is not limited to, the unauthorized collaboration with another person in preparing academic assignments offered for credit or collaboration with another person to commit a violation of any section of the rules on scholastic dishonesty.

iv.   All written work that is submitted will be subject to review by plagiarism software.

UT Tyler Resources for Students
• UT Tyler Writing Center (903.565.5995), writingcenter@uttyler.edu
• UT Tyler Tutoring Center (903.565.5964), tutoring@uttyler.edu
• The Mathematics Learning Center, RBN 4021, this is the open access computer lab for math students, with tutors on duty to assist students who are enrolled in early-career courses.
• UT Tyler Counseling Center (903.566.7254)

College of Business Statement of Ethics:
The ethical problems facing local, national and global business communities are an ever-increasing challenge. It is essential the College of Business and Technology help students

prepare for lives of personal integrity, responsible citizenship, and public service. In order to accomplish these goals, both students and faculty of the College of Business and Technology at The University of Texas at Tyler will:

• Ensure honesty in all behavior, never cheating or knowingly giving false information.
• Create an atmosphere of mutual respect for all students and faculty regardless of race, creed, gender, age or religion.
• Develop an environment conducive to learning.
• Encourage and support student organizations and activities.
• Protect property and personal information from theft, damage and misuse.
• Conduct yourself in a professional manner both on and off campus.