

GEMB 2300 – Business Statistics Course Syllabus

Contact Information

Instructor:	Dr. Janice Chretien (Cree-Shin)
Zoom Tutoring:	Wednesdays 4:00 – 5:00 (optional)
Office Hours:	Monday and Wednesday 1:00 – 4:00. Please email to schedule.
Email:	jchretien@uttyler.edu
Zoom:	https://uttyler.zoom.us/j/5732532611
Preferred Contact Method:	Canvas email for personal issues. Canvas Discussion Board for non-personal issues.

Credit Hours

3 semester hours

Required Materials

- Textbook and courseware: Business Analytics (4th edition); Camm, Cochran, Fry, & Ohlmann, – Must purchase the textbook bundled with a Cengage access code that includes *MindTap* courseware (see registration in Canvas).

Students can choose to purchase MindTap through Cengage Unlimited – a digital subscription service designed to save money. If Cengage Unlimited is purchased, access to any Cengage materials across all UTT courses utilizing Cengage and other eBooks, study guides, and reference materials are included.

To access these *MindTap* course materials:

1. Login to Canvas and select your ‘GENB-2300 (2021-SPRING) 060’ course.
2. Go to your Course Module: ‘MindTap Digital Course Access’.
3. Then select the Course Link: ‘GENB-2300 (2021-SPRING) 060’. a. This link will auto-prompt the Digital Course Registration Screen in a New Window. (Important Note: Enable Browser Pop-Ups.)
4. New User: Select ‘Create Student Account’; Existing User: Sign in with previous login info.
 - a. New User: Verify your account to complete the registration process via your email.
 - b. New User: Open the “Welcome to Cengage” email that was sent to the email account you entered on the Registration Screen and click “Activate Cengage Account” to set your password.
5. Once registered and confirmed for the digital course, you can: 1) Start Trial, 2) Choose Purchase Options or 3) Redeem an Access Code.

- System Check
To check whether your computer meets the requirements for using MindTap, go to:
<http://ng.cengage.com/static/browsercheck/index.html>
- Software: Access to Microsoft Excel
- Webcam and microphone access for optional Zoom sessions

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.

Prerequisites: MATH 1324 Mathematics for Business & Social Science Majors or MATH 1314 College Algebra, MATH 1342 Statistics and BCIS 1305/1405 Business Computer Applications COSC 1307.

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 8/23-8/29	Ch. 1: Introduction	<ul style="list-style-type: none"> • Introduction to the class – application of statistical methods to business applications. • Review skills and knowledge that were covered in prerequisite courses. 	<ul style="list-style-type: none"> • Application of statistical methods to business applications. 	<ul style="list-style-type: none"> • Bonus: Getting Started DB • Chapter 1 Quiz
2 8/30-9/5	Ch. 2: Descriptive Statistics	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • Application for managerial decision making in finance, operations and other business disciplines. 	<ul style="list-style-type: none"> • Chapter 2 Assignment • Chapter 2 Quiz
3 9/6-9/12	Ch. 3: Data Visualization	<ul style="list-style-type: none"> • Use statistical software to graph, compute, and analyze statistical data. • Topics include overview of data visualization, charts, advanced data visualization, & data dashboards. 	<ul style="list-style-type: none"> • Application in sales, finance, marketing and management; while inferring decision from data visualization. 	<ul style="list-style-type: none"> • Bonus: Getting Started DB • Chapter 3 Assignment • Chapter 3 Quiz
4 9/13-9/19	Ch. 4: Probability: An Introduction to Modeling Uncertainty	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • Creating a stock portfolio. • Calculating payoffs to make optimal decision. 	<ul style="list-style-type: none"> • Chapter 4 Assignment • Chapter 4 Quiz
5 9/20-9/26	Ch. 6: Statistical Inference I	<ul style="list-style-type: none"> • Construct and interpret confidence intervals for means and proportions. • Topics include selecting a sample, point estimation, & sampling distributions. 	<ul style="list-style-type: none"> • Applying concept of probability for statistical process control. 	<ul style="list-style-type: none"> • Bonus: Getting Started DB • Chapter 6 Assignment • Chapter 6 Quiz
6 9/27-10/3	Ch. 6: Statistical Inference II	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • Decision making on population characteristics from sample. 	<ul style="list-style-type: none"> • Chapter 6 Case Study – Young Professional Magazine (p. 324) • Bonus: Peer Review
7 10/4-10/10	Mid-Term Exam	<ul style="list-style-type: none"> • Exam will cover chapters 1,2,3,4 & 6 		

Week	Readings	Topics	Critical Business Applications	Assignments
8 10/11-10/17	Ch. 7: Linear Regression I	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • Learning the tools of predictive modeling. • Understanding the proper application and interpretation of the results for decision making in business. 	<ul style="list-style-type: none"> • Bonus: Getting Started DB • Chapter 7 Assignment • Chapter 7 Quiz
9 10/18-10/24	Ch. 7 – Linear Regression II	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • Continuation of above. 	<ul style="list-style-type: none"> • Chapter 7 Case Study – Predicting Winnings for Nascar Drivers (p. 405) • Bonus: Peer Review
10 10/25-10/31	Ch. 8: Time Series Analysis and Forecasting I	<ul style="list-style-type: none"> • Using regression analysis and other tools for forecasting. • Topics include time series patterns, forecast accuracy, moving averages and exponential smoothing. 	<ul style="list-style-type: none"> • Studying a variety of techniques for predictive modeling in business. • Predicting stock price, sales and demand. 	<ul style="list-style-type: none"> • Bonus: Getting Started DB • Chapter 8 Assignment • Chapter 8 Quiz
11 11/1-11/7	Ch. 8: Time Series Analysis and Forecasting II	<ul style="list-style-type: none"> • Topics include using regression analysis for forecasting, determining the best forecasting model to use. 	<ul style="list-style-type: none"> • Learning the use of common tools (e.g., Excel) for forecasting. • Application of correct forecasting methods for different business environment. 	<ul style="list-style-type: none"> • Chapter 8 Case Study – Forecasting Food and Beverage Sales (p. 450) • Bonus: Peer Review
12 11/8-11/14	Ch. 10: Spreadsheet Models	<ul style="list-style-type: none"> • Use statistical software to graph, compute, and analyze statistical data. • Topics include building good spreadsheet models, What-if analysis, Excel functions for modeling, auditing spreadsheet models, predictive and prescriptive spreadsheet models. 	<ul style="list-style-type: none"> • Application to essential business planning (risk analysis, inventory control, break-even analysis) – predictive and prescriptive analysis. 	<ul style="list-style-type: none"> • Chapter 10 Assignment • Chapter 10 Quiz
13 11/15-11/21	Ch. 12: Linear Optimization Models	<ul style="list-style-type: none"> • Calculate expected values to evaluate multiple outcomes of a decision. • Topics include simple maximization problems, simple minimization problems, special cases of linear program outcomes, sensitivity analysis, general linear programming notation, generating an alternative optimal solution for a linear program. 	<ul style="list-style-type: none"> • Review examples covering investment portfolio selection, transportation planning, and advertisement planning. 	<ul style="list-style-type: none"> • Bonus: Getting Started DB • Chapter 12 Assignment • Chapter 12 Quiz

Week	Readings	Topics	Critical Business Applications	Assignments
14 11/22-11/28	Winter Break			
15 11/29-12/5	Ch. 13: Integer Linear Optimization Models	<ul style="list-style-type: none"> • Topics include types of integer linear optimization models, solving integer optimization models. • Applications involving binary variables, modeling flexibility provided by binary variables, generating alternatives in binary optimization. 	<ul style="list-style-type: none"> • Review examples covering capital budgeting, product design, and market share optimization. 	<ul style="list-style-type: none"> • Bonus: Getting Started DB • Chapter 13 Assignment • Chapter 13 Quiz
16 12/6-12/11	Final Exam	<ul style="list-style-type: none"> • Exam will cover chapters 7, 8, 10, 12 & 13 		

Due Dates and Possible Points

Week	Module	Getting Started ^a	Assignment	Quiz	Exam	Case study	Peer Review ^b
1	Introduction	1(8/29)		10(8/29)			
2	Descriptive Statistics		10(9/5)	10(9/5)			
3	Data Visualization	1(9/12)	10(9/12)	10(9/12)			
4	Probability: An Introduction to Modeling Uncertainty		10(9/19)	10(9/19)			
5	Statistical Inference I	1(9/5)	10(9/26)	10(9/26)			
6	Statistical Inference II					10(10/3)	1(10/3)
7	Mid-Term Exam				125(10/7)*		
8	Linear Regression I	1(10/17)	10(10/17)	10(10/17)			
9	Linear Regression II					10(9/5)	1(9/5)
10	Time Series Analysis & Forecasting I	1(10/24)	10(10/24)	10(10/24)			
11	Time Series Analysis & Forecasting II					10(10/31)	1(10/31)
12	Spreadsheet Models		10(11/7)	10(11/7)			
13	Linear Optimization Models	1(11/21)	10(11/21)	10(11/21)			
14	Winter Break						
15	Integer Linear Optimization Models	1(12/5)	10(12/5)	10(12/5)			
16	Final Exam				125(12/7)		
Total		<i>7 bonus</i>	90	100	250	30	<i>3 bonus</i>

Note. All assignments are located in Canvas. Assignments are due Sunday by Midnight. Bolded numbers indicate maximum possible point value followed by the due date. Mid-term and Final exams will be completed in class.

^a Participation in getting started (Weeks 1, 3, 5, 8, 10, 13, and 15) is worth 1 bonus point if substantive post and reply is posted by the due date.

^b Participation in peer review is worth 1 bonus point if post of student's own work and review of peer's work is posted by due date. Bonus points are only awarded if all other module work (e.g., quiz, assignments) has been completed and/or submitted and is not late.

Course Evaluation

Component	Points
Assignments	90 (9 @ 10 points each)
Chapter Quizzes	100 (10 @ 10 points each)
Case Studies	30 (3 @ 10 points each)
Exams	250 (2 @ 125 points each)
Total	475 points

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.
- Two attempts at each chapter assignment, where you receive the highest grade of the attempts made.
- Bonus opportunities throughout semester.
- Feedback on assignments.
- Course schedule in the Syllabus may be altered during the semester due to unforeseen circumstances.

Course Policies:

Class Meeting Attendance

Attending all class sessions is expected and required for successful completion of learning objectives. If absences occur, it is your responsible for contacting the instructor in advance so that adjustments can be made to the instructional activities planned for a specific session. You are also responsible for all work that is missed due to absent from any class meeting, or portion of it. Please Note: excused absences for religious days, university authorized sports activities, or active military services are permitted according to the policies outlined in the UT Tyler Graduate Handbook.

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.

University Policies:

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/campuscarry/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. 25.) 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 (September 3, 2021) 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.

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.

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.

Important Covid-19 Information for Classrooms and Laboratories

Students are required to wear face masks covering their nose and mouth, and follow social distancing guidelines, at all times in public settings (including classrooms and laboratories), as specified by [Procedures for Fall 2020 Return to Normal Operations](#). The UT Tyler community of Patriots views adoption of these practices consistent with its [Honor Code](#) and a sign of good citizenship and respectful care of fellow classmates, faculty, and staff.

Students who are feeling ill or experiencing symptoms such as sneezing, coughing, or a higher than normal temperature will be excused from class and should stay at home and may join the class remotely. Students who have difficulty adhering to the Covid-19 safety policies for health reasons are also encouraged to join the class remotely. Students needing additional accommodations may contact the Office of Student Accessibility and Resources at University Center 3150, or call (903) 566-7079 or email saroffice@uttyler.edu.

Recording of Class Sessions

Class sessions may be recorded by the instructor for use by students enrolled in this course. Recordings that contain personally identifiable information or other information subject to FERPA shall not be shared with individuals not enrolled in this course unless appropriate consent is obtained from all relevant students. Class recordings are reserved only for the use of students enrolled in the course and only for educational purposes. Course recordings should not be shared outside of the course in any form without express permission.