

GENB 2300 – Business Statistics
Monday and Wednesday 2:30 pm – 3:55 pm, Spring 2024
COB 251

Instructor: Dr. Sangok Yoo (pronounced Sæn-gək ju:) **Email:** syoo@uttyler.edu (preferred contact method)
Office: COB 315.17 **Office Phone:** 903-565-5646
Office Hours: Monday and Wednesday: 11:30 am to 2:00 pm
By appointment via email. Zoom meetings can be scheduled by request.

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. The full Microsoft Office suite, including Excel, is available for you as a student from UT Tyler IT at <https://www.uttyler.edu/it/office365/365-proplus-students.php>. It is suggested that you install Excel on your computer and install the “Data Analysis” module, which is free and required for some assignments. If you use the online version of 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.

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:

Participation (5%)	5%
Chapter Assignment (45%)	
Excel Homework	25%
Quiz	20%
Exams (50%)	
Midterm	20%
Final	30%
Course Total	100%

Participation (5% of grade): Participation is a critical part of the class. Your participation grade will be graded based on your attendance and in-class participation. Students will be responsible to report an absence in advance to avoid penalty. *Your active participation* may increase your chance to have bonus points throughout this course.

Chapter Assignments (45% of grade): “Chapter Assignments” is a critical part of the class, consisting of homework and quiz of each chapter. *Late submissions will be penalized by 10% for any full or partial day late.*

1. **Excel Homework (25%):** Homework problems will be assigned to help students mainly learn quantitative tools and understand business analytics deeply (due: **11:59pm, Saturday**).
 - 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). Note that 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.
 - b. 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.
 - c. **Ungraded practice problems/solutions** will be provided to help students understand homework problems.
 - d. **HW resubmission:** Students who submit an HW solution “in time” have a resubmission opportunity to enhance their understanding of excel practices. To receive potential bonus points properly, students should follow **the resubmission policy** on the Canvas page.
2. **Quiz (20%):** Students’ learning will be also assessed by quizzes (due: **11:59pm, Saturday**). Quizzes will be open book. Two attempts at each weekly quiz, where you receive the highest grade of the attempts made.

Exams (50% of grade): There will be two exams – Midterm (20%) and Final (30%) with using the ProctorU Extension. The exams will be in multiple choice and true/false formats. Your 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 submissions will not be accepted.*

Grading Scale: Students will be evaluated based on the grading scale below.

A	90% - 100%
B	80% - 89.9%

C	70% - 79.9%
D	60% - 69.9%
F	≤ 59.9%

Note: Final grades will not be rounded or adjusted based on proximity to these cut-points.

Course Outline/Major Topics Studied:

Week	Dates	Readings	Key Topics *Bonus Point Opportunity	Note
1	1/16~1/20	Ch1 Introduction	Introduction	
2	1/21~1/27	Ch2 Descriptive Statistics I	Types of Data, Modifying Data, Creating and Analyzing Distribution	
3	1/28~2/3	Ch2 Descriptive Statistics II	Measures of Location, Variability, Association between two variables	Ch2 HW/Quiz Due (2/3)
4	2/4~2/10	Ch3 Data Visualization	Table Design Principles, PivotTables, Scatter and Line Charts	Ch3 HW/Quiz Due (2/10)
5	2/11~2/17	Ch4 Probability I	Basic and Conditional Probability, Discrete/Continuous Variables	
6	2/18~2/24	Ch4 Probability II	Normal Probability Distribution	Ch4 HW/Quiz Due (2/24)
7	2/25~3/2	STUDY WEEK 1	*you can resubmit previous Excel HWs of Ch 2, 3 (Due: 10/7)	
8	3/3~3/9	Midterm Exam	Ch 1, 2, 3, 4	
SB	3/10~3/16	Spring Break		
9	3/17~3/23	Ch6 Statistical Inference I	Sample and Population, Point Estimation *you can resubmit previous Ch4 Excel HW (Due: 10/21)	
10	3/24~3/30	Ch6 Statistical Inference II	Sampling Distribution, Interval Estimation	
11	3/31~4/6	Ch6 Statistical Inference III	Hypothesis Testing	Ch6 HW/Quiz Due (4/6)
12	4/7~4/13	Ch7 Linear Regression I	Simple Linear Regression Model, Least Squares Method	
13	4/14~4/20	Ch7 Linear Regression II	Assessing the Fit of the Regression Model, Inference and Regression	Ch7 HW/Quiz Due (4/20)
14	4/21~4/27	STUDY WEEK 2	*you can resubmit previous Excel HWs of Ch 6, 7 (Due: 4/27)	
15	4/28~5/3	Final Exam	Ch 2, 4, 6, 7 *Three bonus points assignments (Due: 5/3)	

Disclaimer: Course schedule is subject to change and you will be responsible for abiding by any such changes. Your instructor will notify you of any changes.

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.

- All quizzes and exams are open book. However, it will be timed so it is important to prepare for them properly and in a timely manner.
- Bonus opportunities throughout semester.
- Timely feedback on assignments.
- Course schedule in the Syllabus may be altered during the semester due to unforeseen circumstances.

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.

University Policies and Information Highlights*:

Final Exam Policy

Final examinations are administered as scheduled. If unusual circumstances require that special arrangements be made for an individual student or class, the dean of the appropriate college, after consultation with the faculty member involved, may authorize an exception to the schedule. Faculty members are required to maintain student final examination papers for a minimum of three months following the examination date.

Academic Honesty and Academic Misconduct

The UT Tyler community comes together to pledge that "Honor and integrity will not allow me to lie, cheat, or steal, nor to accept the actions of those who do." Therefore, we enforce the [Student Conduct and Discipline policy](#) (Links to an external site.) in the Student Manual Of Operating Procedures (Section 8).

COVID Guidance

- **Information for Classrooms and Laboratories:** It is important to take the necessary precautions to ensure a healthy and successful year. UT Tyler continues to urge you to protect yourselves against the flu, COVID and any new threats that may be developing. Be diligent about preventive measures such as washing hands, covering sneezes/coughs, social distancing, and vaccinations, which have proven to be successful in slowing the spread of viruses. Encourage those who don't feel well to stay home, and if they show symptoms, ask them to get tested for the flu or COVID. Self-isolation is important to reduce exposure ([CDC quarantine/isolation guidelines](#) (Links to an external site.)). Please work with your faculty members to maintain coursework and please consult [existing campus resources](#) (Links to an external site.) for support.

***You can find the details of university policies about the following areas in the “University Policies and Information” page on the class Canvas site.**

- Withdrawing from Class
- Incomplete Grade Policy
- Grade Appeal Policy:
- Disability/Accessibility Services
- Military Affiliated Students
- FERPA
- Absence for Official University Events or Activities
- Absence for Religious Holidays
- Campus Carry