**GENB 2300 – Business Statistics**
**Tuesday and Thursday 3:30 pm – 4:50 pm, Fall 2022**
**COB 214**

**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**: Tuesday and Thursday: 1:30 pm to 3:00 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
- 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.

- *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.

**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 (10%)** | |
| Attendance | 5% |
| Weekly Reflections (Canvas) | 5% |
| **Chapter Assignments (50%)** | |
| Homework | 25% |
| Quiz | 25% |
| **Exams (40%)** | |
| Midterm | 20% |
| Final | 20% |
| **Course Total** | 100% |

**Participation (10% of grade):** Participation is a critical part of the class. Your participation grade will consist of the following:

1. **Attendance (5%):** Students' attendance will be graded. 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.
2. **Weekly Reflections (5%):** Students will be asked to provide their reflections on the learning contents and process of the course (via Canvas) by every Friday 11:59pm. ***Late submissions will be penalized by 10% for any full or partial day late***. If your assignment is turned in at 12:01 am, it is considered late!! Be sure to turn in all assigned work for grading by the deadline.

**Chapter Assignments (50% of grade):** ***Late submissions will be penalized by 10% for any full or partial day late***. If your assignment is turned in at 12:01 am, it is considered late!! Be sure to turn in all assigned work for grading by the deadline. Your chapter assignments grade will consist of the following:

1. **Homework (25%):** Students' learning will be assessed by homework (due: **11:59pm, Sunday**). Each homework is worth 25 points each. Homework problems will be assigned to help students mainly learn quantitative tools and understand business analytics deeply. On Canvas, ungraded practice problems will be provided to help students understand homework problems. In addition to the practice problems, students are encouraged to solve practice questions at the end of each chapter of the textbook. As the semester progresses, the instructor may revise the assignments. I will notify you when and if those changes are made. Here are some highlights:
    a. You are required to turn in all assignments (Excel files) on Canvas.
    b. If you show the right process to solve each question, you can expect to have partial points, although you provide wrong answers.
    c. The guideline/template for assignments will be provided on Canvas.
2. **Quiz (25%):** Students' learning will be also assessed by quizzes (due: **11:59pm, Sunday**). Quizzes will be open book. Here are some highlights:
    a. Two attempts at each weekly quiz, where you receive the highest grade of the attempts made.

**Exam (40% of grade):** There will be two exams – Midterm (20%) and Final (20%). The exams will be in multiple choice and true/false formats. Your exams will be open book; however, it will be timed so it is important to prepare for them properly and in a timely manner. ***Late submission will not be accepted***.

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

| | |
|---|---|
| A | 90% - 100% |
| B | 80% - 89% |
| C | 70% - 79% |
| D | 60% - 69% |
| F | ≤ 59% |

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

**Course Outline/Major Topics Studied:**

| Week | Dates | Topics/Assigned Readings | Assigned Readings | Note |
|---|---|---|---|---|
| 1 | 8/22-8/26 | Introduction | Ch. 1 | |
| 2 | 8/29-9/2 | Descriptive Statistics I | Ch. 2 | |
| 3 | 9/5-9/9 | Descriptive Statistics II | Ch. 2 | |
| 4 | 9/12-9/16 | Probability: An Introduction to Modeling Uncertainty I | Ch. 4 | |
| 5 | 9/19-9/23 | Probability: An Introduction to Modeling Uncertainty II | Ch. 4 | |
| 6 | 9/26-9/30 | Statistical Inference I | Ch. 6 | |
| 7 | 10/3-10/7 | Statistical Inference II | Ch. 6 | |
| 8 | 10/10-10/14 | **Midterm Exam** (Thursday, 10/13, 3:30 pm - 4:50 pm) | | |
| 9 | 10/17-10/21 | Linear Regression I | Ch. 7 | |
| 10 | 10/24-10/28 | Linear Regression II | Ch. 7 | |
| 11 | 10/31-11/4 | Time Series Analysis and Forecasting I | Ch. 8 | |
| 12 | 11/7-11/11 | Time Series Analysis and Forecasting II | Ch. 8 | |
| 13 | 11/14-11/18 | Spreadsheet Models I | Ch. 10 | |
| 14 | 11/21-11/25 | ***Thanksgiving*** | | |
| 15 | 11/28-12/2 | Spreadsheet Models II | Ch. 10 | |
| 16 | 12/5-12/9 | **Final Exam** (Thursday, 12/8, 3:30 pm - 5:30 pm) | | |

**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