Welcome to BA 501: Business Statistics

Instructor: **Jennifer Graves**
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Office Hours: MW 12:00-12:45pm via Zoom link (Meeting ID: 972 4635 0862; passcode: 1248)

Class TA: **Gani Nurmukhametov**
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TA office hours: Th 12:00-1:00 pm via Zoom link (Meeting ID: 949 6922 2753; No passcode needed)
TA sessions: 1st and 2nd review sessions are scheduled on February 2 (time TBD) and February 24 (2:00 – 4:00 pm) in Zoom (Meeting ID: 977 6198 6537; No passcode needed) and optional to attend.
3rd review session will be held in-class on March 8, during the regular class time.

Course Description and Objectives

Among the most valuable skills in business is the ability to understand data and statistics. With more than 90% of data in the world having been created in the last two years, that ability will only grow in importance in the future. This class seeks to provide basic data literacy through foundational concepts in statistics. It will teach you how to analyze, interpret, and question data. It will help you develop analytical capabilities that can improve any company. It will show you how to make better decisions based not on intuition, but on data insights.

The class is focused on the foundation of quantitative analysis—using statistical approaches to diagnose business issues and make better decisions. Its objectives are twofold: 1) to give business analysts a toolkit of descriptive and inferential analyses**;** and 2) to teach business executives how to ask the right questions when data is involved, interpret research results, and set up valid tests.

The main components of the course are methods for describing and summarizing data, fundamentals of probability, and statistical inference. Data analyses is done in Microsoft Excel using Data Analysis Toolpak and StatTools Excel add-in by Palisade Suite. There is also the option of learning R using the RStudio interface.

Required materials

- **Textbook**: Practical Business Statistics (7th Edition) by Andrew F. Siegel.
- **Cases**: See Canvas for links to the three cases required to be purchased individually.
- **Microsoft Excel** and **StatTools** for Microsoft Excel: See Canvas page for additional useful technology setup information and links.

Grading

Your final grade will be determined as follows:

Participation	10%
Assignments	45%
Final exam	45%

Participation: In-class participation serves to enhance the learning environment for everyone. Active participation helps students better remember information, clarify difficult concepts, and increase understanding by applying class concepts to what is most relevant to their lives. Not to mention, a question you have could be a valuable learning opportunity for someone else who has the same question.

Participation will be graded 50/50 based on quizzes and case discussions.

- **Quizzes:** There will be more than 10 quizzes, but your best 10 quiz scores will count. Quizzes are intended to help you quickly work with the material learned in class. As such, they are short and due the day of class by 11:59pm. Note: Panopto uploads often take 48hrs to post after a lecture and may not be available prior to the quiz due date.
- **Case discussions:** There will be three in-class case discussions. Each student is expected to have 1 high quality comment across all three cases (e.g., synthesis of the case learnings) or 2 medium quality comments across all three cases (e.g., initial case facts). An incorrect answer will not reduce points (you won't earn any positive points, but a wrong answer won't "cancel out" a correct answer). Passing on answering or being unprepared will result in negative points. Please be sensitive to the need for other classmates to actively participate. Focus your contributions to a single issue. There will be one grade entry on Canvas for case discussions (combined), with maximum of 5 points. **A warm call list** will be used to notify students in advance of the date they may be called upon spontaneously for case questions. I will not call on students outside of their warm call day unless a student raises their hand. It is still up to you to gain your participation points so do participate outside of just your warm-call date!
- **Classroom norms:** Class norms are expectations and policies we will co-create on the first day of class to have an ideal learning environment for all students. Violation of these norms will lower your participation grade.

Assignments: There are four case study memos (team assignments) and three problem sets (individual assignments). Team assignments are 6 points each, 24 points in total; individual assignments are 7 points each, 21 points in total. Timely completion of assignments will help you develop a strong conceptual foundation to apply to future classes. For the sake of equity and fairness, all students will have the same amount of time to demonstrate their mastery of assignments.

- **Late policy:** Late assignments (except students with accommodations) will not receive credit as an indication that an acceptable level of mastery was not shown in the time allotted.
- **Rare circumstances**: If you know that your assignment will be late due to illness or other extreme circumstances, contact our TA to make arrangements well in advance.
- **Format**: You must submit the assignments on Canvas before the due date specified (typically by 11:59pm on Sundays) in the format specified on Canvas. Do not send links to google docs or attachments of your homework.

Final exam: The final is a take-home, open notes/book exam. The exam must be completed individually with no use of the internet outside our class website and the Foster remote lab. Any use of the internet or individual support will be considered a violation of this and result in a zero-grade for the exam. If you have a valid scheduling conflict, please inform me at least two weeks prior to the exam. If you do not make arrangements, no make-up exam will be given.

Tentative Course Calendar

(subject to change; see Canvas and class announcements for latest schedule)

Week	Date	Topic	Readings	Due
1	1/5	Introduction & Structuring Analysis	Chapter 1	-
2	1/9 1/11	Collecting and classifying data Summarizing single variables	Chapters 2, 3 Chapters 4, 5	Case 1: due 1/15 11:59 pm
3	1/16 1/18	No class – holiday (MLK Jr Day) **Case 1 discussion: Boston Pine Street Inn**	Chapter 6	Problem Set 1: due 1/22 11:59pm
4	1/23 1/25	Probability Random numbers 1	Chapters 6, 7	Case 2: due 1/29 11:59 pm
5	1/30 2/1 2/2	Random numbers 2 **Case 2 discussion: Firestone Canada Inc** *Optional TA review session time TBD*	Chapter 7	-
6	2/6 2/8	Statistical Confidence & sample sizes Hypothesis testing 1	Chapters 8, 9, 10	Problem Set 2: due 2/12 11:59 pm
7	2/13 2/15 2/17	Hypothesis testing 2 Finding relationships: correlation Finding relationships: regression	Chapters 10, 11	Case 3a: due 2/19 11:59 pm
8	2/21 2/22 2/24	No class – holiday (Presidents' Day) Finding relationships: multivariate regression *Optional TA review session 2-4pm*	Chapter 12	Case 3b: due 2/26 11:59 pm
9	2/27 3/1	**Case 3 discussion: Hollywood Rules** Finding relationships: logistic regression	Chapter 13	Problem Set 3: due 3/5 11:59 pm
10	3/6 3/8 3/10	Practical application & communicating results *Pre-exam TA review session (in-class)* **Final Exam take-home**	-	Final Exam: due 3/10 11:59 pm

Course Policies

Syllabus Purpose and Disclaimer
Every effort will be made to avoid changing the course schedule, but adjustments may be necessary to accommodate errors, omissions, or unforeseen events (such as weather events). In the event changes are made to the syllabus, students will be informed during class and on the course website. It is your responsibility to be aware of these changes, so please check the course site often.

Academic Integrity and Student Conduct
This program employs the principles and procedures espoused by the University of Washington Community Standards and Student Conduct guidelines to maintain academic integrity in the course. The Code establishes the expectation that students will practice high standards of professional honesty and integrity. In particular, implementation of the Code at the Foster School of Business prohibits cheating, attempted cheating, and plagiarism—including improper citations of source material—as it pertains to academic work. Suspected violations will be handled in compliance with the University of Washington Student Conduct Code as outlined in Washington Administrative Code 478-121.

Access and Accommodations
Your experience in this class is important. If you have already established accommodations with Disability Resources for Students (DRS), please communicate your approved accommodations to me at your earliest convenience so we can discuss your needs in this course.

If you have not yet established services through DRS, but have a temporary health condition or permanent disability that requires accommodations (conditions include but not limited to; mental health, attention-related, learning, vision, hearing, physical or health impacts), you can learn more here: http://depts.washington.edu/uwdrs/

Religious Accommodations Policy
Washington state law requires that UW develop a policy for accommodation of student absences or significant hardship due to reasons of faith or conscience, or for organized religious activities. The UW's policy, including more information about how to request an accommodation, is available at Religious Accommodations Policy (https://registrar.washington.edu/staffandfaculty/religious-accommodations-policy/). Accommodations must be requested within the first two weeks of this course using the Religious Accommodations Request form (https://registrar.washington.edu/students/religious-accommodations-request/).

Health and COVID
See UW's face covering policy and FAQs on face coverings. To ensure the health and safety of the University campus community and the public, face coverings are required to be worn in our classroom, regardless of vaccination status. Do not eat during indoor class sessions to adhere to the requirement that masks must remain on in our classroom.
- This class is conducted in person. Therefore, unless you meet the criteria for an accommodation from Disability Resources for Students (DRS) or a special arrangement approved by the COE Office of the Student Services that allows you to take the course remotely, **you should only register for this class if you can attend in person.**
- Please contact UW Disability Resources for Students (DRS) directly if you feel you may be eligible for an accommodation based on your status as an immunocompromised individual or based on other diagnosed physical or mental health conditions that might prevent you from being able to take classes in-person.
- If you are either living with an individual who is immunocompromised, OR you are unable to obtain a visa to travel to the US, you may be eligible for a "special arrangement" that will allow you to take this course remotely. Requests for special arrangements to take the class remotely should have been submitted to and approved by the COE Assistant Dean for Academic and Student Affairs before the beginning of the quarter. **Special arrangements for the full quarter are not available once the class has begun.**
- **If you feel ill, have been exposed to COVID-19, or exhibit possible COVID symptoms, you should not come to class**. If you need to temporarily quarantine or isolate per CDC guidance and/or campus policy, you are responsible for notifying your instructors as soon as possible by email. If you have a known exposure to COVID-19 or receive a positive COVID-19 test result, you must it report to campus Environmental Health & Safety (EH&S).

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