

Identification	Subject	BSA 245 Business Statistics– 3KU/6ECTS
	Program	Undergraduate
	Department	Economics and Management
	Term	Fall 2025
	Instructor	Vusal Mammadrzayev
	E-mail	vusal.mammadrzayev@khazar.org
	Classroom/hours	TBA
	Language	English
Prerequisites	MATH 217 Probability Theory and Mathematical Statistics	
Compulsory/ Elective	Compulsory	
Textbooks and course materials	<p>1. Newbold Paul, William L. Carlson and Betty M.Thorne. (2020). Statistics for Business and Economics, 9th Edition, USA. (NW)</p> <p>2. Agresti, A., & Finlay, B. (2020). Statistical methods for the social sciences, 14th edition. Upper Saddle River, New Jersey: Pearson. ISBN 9780130272959. (AF)</p> <p>3. Anderson, D. R., Sweeney, D. J., & Williams, T. A. (2019). Statistics for Business and Economics (14th ed.). Cengage Learning</p>	
Course objective and content	<p>The first course in the core statistics sequence covers topics in Probability Theory and Mathematical Statistics. The main purpose of these courses is to provide you with a foundation of statistics and probability. The tools learned in these courses are essential building blocks for the other econometrics courses in the sequence. Focus in these courses will be on basic principles, including, among other things: probability, random variables, conditional probability, probability densities and distributions, characteristic functions, test statistic formulation and distribution theory, statistical inference, and basic regression. Emphasis will be placed on applied problem-solving using the tools learned in the class.</p>	
Learning Outcomes	<p>After this course, students will be able to calculate descriptive and numerical measures and probabilities based on both sample and population datasets to make initial inferences about population parameters. Furthermore, they will acquire skills to test population parameters by using Hypothesis testing based on sample observations. During the lectures, students will gain insights into the application of statistical methods in real-world business and economic contexts.</p>	
Teaching Methods	Case analysis/Exercises/Assignments	X
	Group discussion	X
	Lecture	X
Evaluation	Methods	Percentage (%)
	Midterm Exam	30
	Group Project	10
	Quizzes (3)	15 (Each quiz is 5% of the final grade)
	Attendance	5
	Activity	5
	Final Exam	35
	Total	100
Policy	<p>Quiz Each Quiz will be worth 5% of the final grade. It is planned to hold sessions in the fourth, tenth, and thirteenth weeks of the Semester. It is planned to be conducted at the university if</p>	

	<p>education is face-to-face and will consist of Multiple-choice and open-ended questions. Exam time will be 30 minutes. Further details about the quiz will be communicated by the instructor.</p> <p>- Group Project.</p> <p>Students must submit their group projects by the end of the first week of November. This assignment will allow students to do a small statistical analysis and apply techniques that was taught throughout lectures. The topic of the assignment for each group will be assigned by the instructor, and Students will form groups consisting of 3 students in each. Students are required to provide a Report and a 10-minute online Presentation on the Teams program based on their assigned topics. The exact deadline for submission of the Report will be announced during the lecture. The detailed feedback and further comments related to the structure and quality of the Report will be provided by the instructor after submission. This assignment gives an opportunity for students to conduct research independently and use the statistical tools and techniques that they acquired through Lectures and practical sessions.</p> <p>- Attendance Policy</p> <p>Students should attend all classes. The student must provide the proof of reason for the unavoidable absence. In this case, the absence will not result in grade subtraction.</p> <p>Students should come to the classes on time. Late arrival more than 15 minutes will result in an absence on the attendance sheet. In the event of a late arrival, the student must inform the instructor in advance.</p> <p>Important Note: If the student misses 25% of all classes during the semester, he or she will not be allowed to participate in the examination.</p> <p>- Class participation in this course:</p> <p>5% of the final grade will be given for class participation. It is required of students to contribute to the class discussion and actively participate in teamwork. The quality of contribution will be the main factor, not the quantity of contribution.</p> <p>Academic Dishonesty</p> <p>Students are expected to conduct themselves in a professional manner. Academic dishonesty, such as plagiarism and cheating, will not be tolerated. Therefore, students are expected to be honest and ethical in their academic work. Cases of academic dishonesty will be immediately reported to the Director’s office for disciplinary action.</p> <p>Office Hours</p> <p>The instructor will be available to consult with students regarding class-related questions on a regular basis by appointment. Meetings with students outside office hours should be scheduled in advance by sending an email to the instructor.</p>	
Tentative Schedule		
Week	Topics	Textbook/Chapters

1	Using Graphs to Describe Data	Chapter 1 (NW)
2	Using Numerical Measures to Describe Data	Chapter 2 (NW)
3	Elements of Chance: Probability Methods	Chapter 3 (NW)
4	Conditional Probability and Bayes' Theorem (Quiz 1)	Chapter 3 (NW)
5	Discrete Probability Distributions	Chapter 4 (NW)
6	Continuous Probability Distribution	Chapter 5 (NW)
7	Midterm Exam	
8	Sampling Distribution of Sample Means and Sample Proportion	Chapter 6 (NW)
9	Confidence Interval Estimation of Unknown Population Mean	Chapter 7 (NW)
10	Confidence Interval Estimation of Unknown Population Mean when the population variance is unknown (Quiz 2)	Chapter 7 (NW)
11	Confidence Interval Estimation: Further Topics. (Quiz 3)	Chapter 8 (NW)
12	Hypothesis Tests of a Single Population.	Chapter 9 (NW)
13	Hypothesis Test of Group Difference (Quiz 3)	Chapter 10 (NW)
14	Introduction to Regression Analysis.	Chapter 11 (NW)
15	Review Class	
16	Final Exam	