Probability and Statistical Inference for Economists

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Office Hours: T. H. 12:00–1:00 pm or by appointment
Classroom & Schedule: BUC 305, T-H 9:00am to 12:00pm

Prerequisites: Introductory Micro and Macro Economics (ECON 2010 and 2020 or equivalents) & college Algebra (MATH 1090 preferred)

Text Books: *Business Statistics* (4th Ed) by Leonard J. Kazmier, ISBN: 978-0-07-163527-1
Elementary Statistics: Picturing the world: (4th ed.) by Larson, R. and Farber, B.. ISBN:978-0136007203

Course Description: This course examines the principles of probability and of descriptive and inferential statistics. Topics include probability concepts, measures of central tendency, normal distributions, and sampling techniques. The application of these principles to simple hypothesis testing methods and to confidence intervals is also covered. The application of these topics in solving problems encountered in personal and professional settings is also discussed.

Course Objectives: Upon the successful completion of this course, the student will be able to:

1. Describe the differences between the various types of data.
2. Apply various descriptive graphical techniques.
3. Calculate measurements of central tendency.
4. Discuss the fundamentals of probability and apply addition rule, multiplication rule, and counting rule.
5. Perform regression analysis and compute correlations using paired data.
6. Describe the characteristics of discrete and continuous probability distributions.
7. Calculate the standardized values of a normal distribution.
8. Design a statistical study with the five-step hypothesis testing procedure.
9. Calculate estimates of population parameters using sample data.
10. Discuss application of course content in the context of a professional setting.
11. Implement technology tools.
12. Conduct ANOVA and goodness of fit tests.
13. Use technology and information resources to research issues in statistics.

Grading and Assessment:
The course grade will be based on quizzes, assignments, midterm and final exam (Quiz: 15%; Assignments: 40%; Midterm: 20%; and Final: 25%).

A ≥ 90%, 90% > A- ≥ 85%, 85% > B+ ≥ 80%, 80% > B ≥ 75%, 75% > B- ≥ 70%, 70% > C+ ≥ 65%, 65% > C ≥ 60%, 60% > C- ≥ 55%, 55% > D ≥ 50%, 50% > E

Class Policies & Procedures:
Canvas will be used for distributing course materials, references, communications and notifying grades. Students are required to maintain an active E-mail address and following the updates on the course site. The instructor retains the right to update and adjust this syllabus at discretion to be respectful of students' right to get reasonable notice of changes. Class schedule could be updated during the semester, so please always pay attention to class announcements.

ADA Policy: The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice needs to be given to the Center for Disability Services (CDS), 162 Olpin Union Building, 581-5020 (V/TDD). CDS will work with you and the instructor to make arrangements for accommodations. All information in this course can be made available in alternative format with prior notification to the Center for Disability Services.