ECON 3640-001
Probability and Statistical Inference for Economists
Spring 2019
Tuesday & Thursday, 2:00 PM - 3:20 PM, GC 5750
3 Credit Hours, Fulfills QR-B Requirement

Instructor
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Objective
This course introduces students to the foundations of statistical analysis. The course will cover graphical and numerical methods of summarizing data, the basic concept of probability, and how to test hypothesis based on samples. You can find these skills useful in a wide range of contexts ranging from reading and interpreting news articles critically, becoming an educated consumer, evaluating policies, to taking more advanced classes in quantitative analysis. This course belongs to the category of Quantitative Reasoning (QR-B) courses.

At the end of the semester a successful student would be able to

- Examine a dataset and construct meaningful graphical and numerical summaries of the data using EXCEL

- Apply statistical inference tools based on point and interval estimation, and test hypotheses in a wide range of contexts

- Critically evaluate statistical results and communicate the implications in simple language to a general audience

Prerequisites
College Algebra, (MATH 1090 preferred), ECON 2010 and 2020.

Suggested textbook

- Frederick J Gravetter, Larry B. Wallnau, Lori-Ann B. Forzano. (2018) *Essentials of Statistics for The Behavioral Sciences.* 9th Edition. Cengage. ISBN-13: 978-1337098120.

Topics

- Frequency distributions

- Central tendency

- Variability

- z-Scores

- Probability

- Populations, Samples, Distribution of sample means

- Hypothesis tests for mean

- Correlation

Course evaluation components and their weights

- Class participation (20% weight): You will work on applied exercises in groups, and discuss your interpretations in the class.

- Exams (80% weight): There will be two exams.

  - Exam 1 on Mar 7, 2019 at usual class time (40% weight).
  - Exam 2 on April 25, 2019 from 1pm to 3pm as per university exam schedule (40% weight).

Course grade criterion

- A $\geq$ 93%, 93% > A- $\geq$ 90%

- 90% > B+ $\geq$ 87%, 87% > B $\geq$ 83%, 83% > B- $\geq$ 80%

- 80% > C+ $\geq$ 77%, 77% > C $\geq$ 73%, 73% > C- $\geq$ 70%

- 70% > D+ $\geq$ 65%, 65% > D $\geq$ 60%, 60% > D- $\geq$ 50%

- 50% > E

Notes

- I will use slides for lecture to save time that will be used for exercises and discussions in class. The lecture slides will be posted on Canvas.

- The exams must be taken at the scheduled time. When a student has a legitimate (documented) reason for missing one exam, the weight of the exam will be transferred to the other exam. Absolutely no make-up exams are given.

- Incompletes are not generally given for non-medical reasons.

- If you have any question regarding your grades, you must ask within a week from the day the grades are posted. No exceptions to this rule will be entertained.

- This syllabus is meant to serve as an outline and guide for our course. Please note that I may modify it with reasonable notice to you. I may also modify the schedule to accommodate the needs of our class. Any changes will be announced in class and posted on Canvas under Announcements.

- All students are expected to abide by the academic code of conduct as laid out by the university: `https://regulations.utah.edu/academics/6-400.php`

Americans with Disabilities Act (ADA) Statement

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, 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. (www.hr.utah.edu/oeo/ada/guide/faculty/)

Addressing Sexual Misconduct

Title IX makes it clear that violence and harassment based on sex and gender (which Includes sexual orientation and gender identity/expression) is a civil rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, color, religion, age, status as a person with a disability, veteran's status or genetic information. If you or someone you know has been harassed or assaulted, you are encouraged to report it to the Title IX Coordinator in the Office of Equal Opportunity and Affirmative Action, 135 Park Building, 801-581-8365, or the Office of the Dean of Students, 270 Union Building, 801-581-7066. For support and confidential consultation, contact the Center for Student Wellness, 426 SSB, 801-581-7776. To report to the police, contact the Department of Public Safety, 801-585-2677(COPS).

Student Names & Personal Pronouns

Class rosters are provided to the instructor with the student's legal name as well as 'Preferred first name' (if previously entered by you in the student profile section of your CIS account). While CIS refers to this as merely a preference, I will honor you by referring to you with the name and pronoun that feels best for you in class, on papers, exams, group projects, etc. Please advise me of any name or pronoun changes (and update CIS) so I can help create a learning environment in which you, your name, and your pronoun will be respected.

Wellness Statement

Personal concerns such as stress, anxiety, relationship difficulties, depression, cross-cultural differences, etc., can interfere with a student's ability to succeed and thrive at the University of Utah. For helpful resources contact the Center for Student Wellness - www.wellness.utah.edu; 801-581-7776.
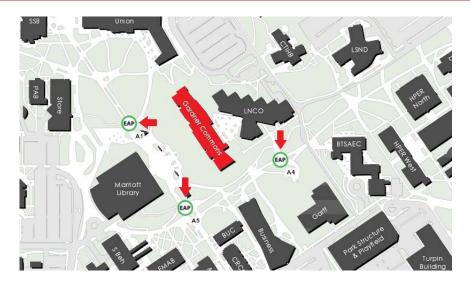
LGBT Resource Center

If you are a member of the LGBTQ community, I want you to know that my classroom is a safe zone. Additionally, the U of Utah has an LGBT Resource Center on campus. They are located in Room 409 in the Oplin Union Building. Hours: M-F 8-5pm. You can visit their website to find more information about the support they can offer, a list of events through the center and links to additional resources: http://lgbt.utah.edu/. Please also let me know if there is any additional support you need in this class.

Veterans Center

If you are a student veteran, the U of Utah has a Veterans Support Center located in Room 161 in the Olpin Union Building. Hours: M-F 8-5pm. Please visit their website for more information about what support they offer, a list of ongoing events and links to outside resources: http://veteranscenter.utah.edu/. Please also let me know if you need any additional support in this class for any reason.

CSBS EMERGENCY ACTION PLAN

BUILDING EVACUATION

EAP (Emergency Assembly Point) – When you receive a notification to evacuate the building either by campus text alert system or by building fire alarm, please follow your instructor in an orderly fashion to the EAP marked on the map below. Once everyone is at the EAP, you will receive further instructions from Emergency Management personnel. You can also look up the EAP for any building you may be in on campus at http://emergencymanagement.utah.edu/eap.

CAMPUS RESOURCES

U Heads Up App: There's an app for that. Download the app on your smartphone at alert.utah.edu/headsup to access the following resources:

- **Emergency Response Guide:** Provides instructions on how to handle any type of emergency, such as earthquake, utility failure, fire, active shooter, etc. Flip charts with this information are also available around campus.

- **See Something, Say Something:** Report unsafe or hazardous conditions on campus. If you see a life threatening or emergency situation, please call 911!

Safety Escorts: For students who are on campus at night or past business hours and would like an escort to your car, please call 801-585-2677. You can call 24/7 and a security officer will be sent to walk with you or give you a ride to your desired on-campus location.

College of
Social and Behavioral Science
THE UNIVERSITY OF UTAH