ECON 3640-001
Probability and Statistical Inference for Economists
Spring 2017
3 Credit Hours, Fulfills QR-B Requirement
Class meets on M & W (11:50 AM - 1:10 PM) in BEH S 116

Instructor
Dr. Haimanti Bhattacharya
Associate Professor, Department of Economics, University of Utah
Email: haimanti.bhattacharya@utah.edu
Office Hours: By Appointment

Objective
This course introduces students to the foundations of statistical analysis.
The course aims to impart the basic understanding about randomness and
how to make inferences based on samples. You can find this skill useful in
a wide range of contexts ranging from reading and interpreting news arti-
cles 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 the software 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 textbooks

- Robert V. Hogg, Elliot Tanis, Dale Zimmerman (2014) *Probability and Statistical Inference.* Pearson.

- David S. Moore, George P. McCabe, Layth C. Alwan, Bruce A. Craig (2011) *The Practice of Statistics for Business and Economics.* Palgrave Macmillan.

Topics

- Summary of variables

- Types of Data

- Probability theory

- Random variables and distributions

- Point and interval estimation

- Hypothesis testing

Course evaluation components and their weights

- Class participation (10% weight): You will be required to work in groups in the class and discuss or debate your interpretations.

- Exams (70% weight): There will be two exams for this course.

- Project (20% weight): You will be required to work on a project to apply the tools learnt in the course.

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- $\geq 70\%$

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

- $50\% > \text{E}$

Notes

- The exams must be taken at the scheduled time. When a student has a legitimate (documented) reason for missing the first exam, the weight of the exam will be transferred to the second 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 in an exam, you must ask within a week from the day the grades are provided. No exceptions to this rule will be entertained.

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/)

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.