Introduction to Empirical Analysis and Quantitative Methods
Political Science 3

Professor Jasjeet Singh Sekhon

Class: 3:30–5pm Tuesday, Thursday
155 Dwinelle

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GSIs and Section Information

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Please note: You are not enrolled in the course unless you are enrolled in a section.

Description

This course is a gentle introduction to empirical methods in political science. We will cover basic topics in research design and data analysis, considering many examples along the way. The two primary goals of the course are: (1) to help students understand simple summaries of data, and (2) to help students understand the difficulties of making causal inferences in the social sciences.

Topics covered include random assignment and random sampling, the differences between experimental and observational studies, external and internal validity, selection bias, basic summaries of data such as means, medians, correlations, covariances, cross-tabulation, histograms, and other plots.

There are no prerequisites beyond those required for admission to Berkeley.

Evaluation

Final grades will be based on a series of homework assignments (30% of final grade), a midterm (25%), a final exam (35%), and class and section participation (10%).

We encourage cooperation in study groups on problem sets. However, the work you turn in must be your own. Write up your own answers and do not copy from anyone else. Photocopies and other reproductions of someone else's answers are not acceptable. Plagiarism and academic dishonesty of any kind will not be tolerated.

The class participation grade has two parts. The first part is based on attendance in discussion sections, and the second is based on your level of activity in section and class.

Thus, attendance in lecture is not required, but it is important that you attend. Lectures do not simply repeat what is in the textbook and readings. They go beyond the assigned readings. Sections will link the lectures and the readings. Although some on-line lecture notes will be provided, lectures go far beyond the slides provided.

There are a limited set of readings for this class. However, you are responsible for carefully and thoroughly reading the material that we do assign.

Book and Online Material

There is one required book, and it is available at various online bookstores and at the University Book Store.

- David A. Freedman, R. Pisani, and R.A. Purves. *Statistics*. New York: W. W. Norton & Company. Forth edition. 2007. ISBN: 0393929728

Electronic copies of other reading will be provided as the course goes along. Some lecture notes, this syllabus, and other material will be made available on the course bSpace site. Lecture notes will be posted before class.

Course outline

This is a general outline for the course. Details will be provided as the course progresses.

1. Experiments and Observational Studies I
    - Freedman et al. Chapters 1–2.
    - "Nudge the Vote" *NYT Sunday Magazine*, page MM28, Oct. 31, 2010. URL:http://www.nytimes.com/2010/10/31/magazine/31politics-t.html
    - Green, Donald P., and Alan S. Gerber. 2002. "Reclaiming the Experimental Tradition in Political Science." In Helen V. Milner and Ira Katznelson, eds., *Political Science: The State of the Discipline*, 3rd Edition. New York: W.W. Norton & Co., pp. 805-32.
    - Only pages 281–285 (stop before the section entitled "Conditional Probability": Jasjeet S. Sekhon. "Quality Meets Quantity: Case Studies, Conditional Probability and Counterfactuals." Perspectives on Politics, June: 281–293. 2004. [LINK]
2. Histograms

- Freedman et al. Chapter 3.

3. The Average
   - Freedman et al. Chapter 4.
4. Normal Approximation
   - Freedman et al. Chapter 5.
5. Measurement Error
   - Freedman et al. Chapter 6.
6. Plotting Points and Lines
   - Freedman et al. Chapter 7.
7. Correlation
   - Freedman et al. Chapters 8–9.
8. Probability
   - Freedman et al. Chapters 13–15.
9. Sampling
   - Freedman et al. Chapters 19–23.
10. Experiments and Observational Studies II
    - Full article: Jasjeet S. Sekhon. "Quality Meets Quantity: Case Studies, Conditional Probability and Counterfactuals." Perspectives on Politics, June: 281–293. 2004. [LINK]