
SOSC 13200 Democracy and Social Science 2
Winter 2009
Cobb Lecture Hall 104 (T/TH 3:00 - 4:20 PM)

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Course Outline

What is the probability that the Democratic party wins a presidential election in 2012? Is people's height a good predictor of their income? Does economic growth cause democratic transition or vice versa? Does third party intervention such as the dispatch of UN peace keeping forces increase the probability of ethnic conflicts?

The course is designed to introduce students to research methodology and quantitative analysis in social science. The major goal of the course is to teach how to use statistical concepts to answer substantive questions in social science. For that purpose, the class will teach students how to use computer for simple statistical tasks. By increasing statistical literacy, students can correctly understand and criticize what arguments in the media and academic journals are scientifically valid.

Textbook

- Alan Agresti and Barbara Finlay. 1997. *Statistical Methods for the Social Sciences* (SMSS), Third Edition. Upper Saddle River, NJ: Prentice Hall. ISBN: 0-13-526526-6.

Software

We will use **Stata** for statistical computation. The software is available on many public computers in the University network. For those who wish to purchase it, student versions of Intercooled Stata are available at a discount from: <http://www.stata.com/order/new/edu/gradplans/gp-direct.html>.

Grade Policy

Three assignments 15% each
In-class and lab participation 10%
In-class group project 10 %
Presentation of final paper 10%
Final paper 25%

- In-class group project: Don't miss the class on Feb. 26!
- Final research paper: The final project of this course is to write a research design for any social science topic that can be answered by empirical methods. A good research design should include (1) a research question, (2) motivation of the research, (3) clear hypotheses to be tested, (4) source of data or data collection method, and (5) empirical methods to investigate the relationship between hypotheses and data. All students will present their paper at the end of quarter.
- Late assignments: There will be a penalty for late submission of assignments (10% per day).
- Challenge: If you have a question about grading, please write up a short memo explaining problems and turn it in to TA. We will review your challenges and respond to it within a week. Note that we do not receive any verbal challenge.
- Questions are encouraged to be asked during classes, lab sessions, or office hours (rather than emailing individually).

Course Plan

1. Introduction (Jan. 6)
 2. Social Science and Quantitative Methods (Jan. 8)
 - Gina Kolata, "Searching for Clarity: A Primer on Medical Studies," *New York Times*, September 30, 2008.
 - SMSS. Ch. 1.
 3. Measurement and Sampling (Jan. 13): **Assignment 1 distributed**
 - SMSS. Ch. 2.
- Lab Session** (Jan. 14)
4. Descriptive Statistics (Jan. 15)
 - SMSS. Ch. 3.
 5. Probability Distributions (Jan. 20): **Assignment 1 is due.**
 - SMSS. Ch. 4.
 6. Statistical Inference (Jan. 22)
 - SMSS. Ch. 5.

7. Comparison of Two Groups (Jan. 27): **Assignment 2 is distributed.**
 - SMSS. Ch. 7.

Lab Session (Jan. 28)
8. Significance Tests (Jan. 29)
 - SMSS. Ch. 6.
9. Chi-square Tests (Feb. 3): **Assignment 2 is due.**
 - SMSS. Ch. 8.
10. Linear Regression 1 (Feb. 5)
 - SMSS. Ch. 9.
11. Linear Regression 2 (Feb. 10): **Assignment 3 is distributed.**
 - SMSS. Ch. 10.

Lab Session: Regression in Stata (Feb. 11)
12. Linear Regression 3 (Feb. 12)
 - SMSS. Ch. 11.
13. Missing Women in Asia (Feb. 17): **Assignment 3 is due.**
 - Emily Oster. "Hepatitis B and the Case of the Missing Women," *Journal of Political Economy*, (December 2005), 113 (6), pp. 1163 -1216.
 - Monica Das Gupta "Explaining Asia's Missing Women: A New Look at the Data," *Population and Development Review*, (September 2005), 31 (3), pp. 529-535.
14. Campaign Spending in House Elections (Feb. 19)
 - Gary Jacobson, "The Effects of Campaign Spending in Congressional Elections," *American Political Science Review* Vol. 72 issue 2 (June 1978), pp. 469-91.
 - Donald Green and Jonathan Krasno, "Salvation for the Spendthrift Incumbent: Re-estimating the Effects of Campaign Spending in House Elections," *American Journal of Political Science* Vol. 32 issue 4 (Nov. 1988), pp. 884-907.
 - Steven Levitt, "Using Repeat Challengers to Estimate the Effect of Campaign Spending on Election Outcomes in the U.S. House." *Journal of Political Economy*, 1994, 102(4), pp. 777-98.
15. Critique of Hypothesis Testing (Feb. 24)
 - Andrew Gelman and Hal Stern. "The difference between "significant" and "not significant" is not itself statistically significant." *American Statistician* Vol. 60, (November 2006), pp. 328 - 331.

- Gerd Gigerenzer. “Mindless statistics” *Journal of Socio-Economics*, Vol. 33 (2004) pp. 587 - 606.
- John P. A. Ioannidis. “Why Most Published Research Findings Are False.” *PLoS Medicine*, Vol.2, No.8, (2005) <http://dx.doi.org/10.1371/journal.pmed.0020124>

16. In-class Group Project (Feb. 26)
17. Paper Presentation 1 (Mar. 3)
18. Paper Presentation 2 (Mar. 5)
19. Paper Presentation 3 (Mar. 10)
20. Final Paper Due (Mar. 12)

ADA Accommodations: Any student who, because of a disability, may require special arrangements in order to meet course requirements should contact me as soon as possible to make necessary arrangements.

Additional Remarks: Cheating will not be tolerated and may result in severe academic sanctions. Disruptive talking in class will not be tolerated. On the other hand, asking and responding to questions in class is strongly encouraged.