

Department/Program: Political Science **Year:** Winter 2010(beginning Jan. 2011)

Course Title: POLI572 – QUANTITATIVE TECHNIQUES OF POLITICAL ANALYSIS

Course Schedule: Fridays 9:10 (SHARP!)-12:00

Location(s): Political Science Seminar Room

Instructor: Fred Cutler

E-mail: cutler@politics.ubc.ca

Office location: Buch C408

Email Group: poli-572@interchange.ubc.ca

Office phone: 822-6841

Website: <https://www.arts.ubc.ca/index.php?id=8467>

Office hours: Appointments By Email (Don't Hesitate)

Course Description: A first – and at this point only – graduate-level course on the tools used by political scientists to interpret large-ish N data and test hypotheses. The course covers regression analysis and its variants: multiple linear regression, models for binary and discrete outcomes, basic time-series and time-series-cross-section analysis. The course will use examples from recent research in international relations, comparative politics, public policy, and Canadian politics. The emphasis is on conceptual understanding and on implementation in statistical software (Stata).

Prerequisites and/or Course Restrictions (from calendar): undergraduate political methodology or statistics

Format of the course: Seminar – Lecture

Required and Recommended Reading:

- Required: Kellstedt, Paul and Guy Whitten. *The Fundamentals of Political Science Research*. Ch 6-11. (used or photocopied or ebook version \$52USD from Cambridge UP website ISBN [9780511460579](https://doi.org/10.1017/9780511460579))
- Required: Jeffrey M. Wooldridge, *Introductory Econometrics* (available online or perhaps bookstore)
You should read everything TWICE !!! I'll make it easy for you this time: Read everything TWICE !!!!!!!
In fact, for the math stuff, you shouldn't even think of it as reading – it's a different skill
- Required: Various articles, see below
- Recommended: Leonard Mlodinow, *The Drunkard's Walk* (bookstore or anywhere) [you'll love this book]

Course Assignments, Due dates, and Grading:

There will be four homework assignments (roughly every two weeks) worth a total of 40% of the course grade. I **STRONGLY** encourage you to work together on these assignments, but you must do the final write-up or spreadsheet separately. You can manage your own collective action problems.

Periodically, and unpredictably, I will give you exercises from the textbook or other sources. There will be a few of these worth 1% - 3% each.

At the end of the course, you will hand in an empirical research paper (about 15 pages, with no literature review), worth 40%. I will provide details as we go along. You should begin to choose a dataset and formulate a research question. This paper can very well lead to, or be a component of, a thesis.

On April 21, we will have a research conference where you present your work. This presentation is worth 5%.

This paper is due for my comments on Monday April 18. The final version is due on April 21.

Course Policies:

Non-discrimination / Harassment / Accommodation:

Students have the right to an education free of discrimination and harassment. UBC has a policy on discrimination and harassment that applies to all members of the UBC community. This policy can be found in the UBC Policy Handbook.

Late and lost assignments / Appeals:

Without instructor permission, late assignments will be assessed a penalty of 2% per day.

COURSE SCHEDULE (SUBJECT TO CHANGE)

All readings referred to simply by chapter and section are from Wooldridge, *Introductory Econometrics*, any edition. KW means Kellstedt and Whitten.

Jan 7 Introduction, Introductions, Goals, Plan, Logistics

Plus introduction to Stata

Jan 14 Review of Introductory Statistics from Kellstedt and Whitten

- KW Chapters 6, 7, 8 slowly and carefully
 - And previous chapters if you really have never encountered ANY of this stuff (eesh).
- Read the *Drunkard's Walk* book. It's on Kindle and some other e-book thingys. And I think it's used at the bookstore under POLI380.
- Get Stata installed on your computer.
- Start on next week's "reading" – it's no fun, so do part of it now.

Week of Jan 17: Meetings with Cutler about your project and its dataset(s)

Jan 21 Review of Probability and Statistics from Wooldridge Appendix + some Stata

Stata exercise given

Appendices A, B, C. (I don't expect you to have all this completely mastered, but you should understand the concepts and terminology at a general level. B and C are much of the same stuff as in the KW book from last week).

Exercises (at end of each appendix)

A.2 & A.8

B.2, B.10

C.1, C.2, C.4, C.6, C.9

(These C problems should be worked on in groups & handed in individually by Jan 25 for 3%)

Jan 28 Regression: Why, What, How? The Simple (Bivariate) Regression Model

Stata Exercise DUE; Assignment 1 GIVEN and due next week!

- Ch. 1 & 2
- KW Ch. 9
- Kennedy, [A Guide to Econometrics](#) Chapter 1 (link from website to e-book at UBC library)
- [Fish and Brooks, Does Diversity Hurt Democracy.](#)

Feb 4 Multiple Regression: Mechanics

Assignment 1 DUE. Assignment 2 given.

- Ch. 3
- [Melanie Manion "The Electoral Connection in the Chinese Countryside" APSR 1996](#)

Feb 11 Multiple Regression: Inference

- Ch. 4 & Ch. 5

- [Lyle Scruggs, "Is there really a link between Neo-Corporatism and Environmental performance"](#)

Feb 18 – Reading week, no class, but

Assignment 2 DUE; Assignment 3 given.

Feb 25 Multiple Regression: more on Inference and Interpretation: putting results into words

- Re-read Chs. 2-4. Try to understand the math/stats more deeply. Read Ch. 6.
- Gelman and Hill, *Data Analysis Using Regression and Multilevel/Hierarchical Models*, Chapter 9 (photocopy or pdf or something).
- King, Tomz, Wittenberg. 2000. "[Making the Most of Statistical Analyses: Improving Interpretation and Presentation.](#)" *American Journal of Political Science* 44(2) (JSTOR). Don't let it freak you out; I'll explain it. But do try to read it! PPT slides are at <http://www.stanford.edu/~tomz/software/clarSC.pdf>

Mar 4 Dummy Variables (Dependent and Independent) and Heteroskedasticity (who cares) and Functional Form and Interactions [read readings in the order given here]

Assignment 3 DUE; Assignment 4 given

- KW sec 11.2 & 11.4
- Ch. 7, 8.1, 8.2
- <http://www.ats.ucla.edu/stat/Stata/webbooks/reg/chapter3/statareg3.htm>
- Cutler, "[Government Responsibility and Electoral Accountability in Federations](#)" *Publius* 34:2
- Section 6.2, 7.4
- KW 11.3
- Alvarez, Garrett, Lange. "Government Partisanship, Labor Organization and Macroeconomic Performance, 1967-1984." *APSR* 1991: 539-556.
- Brambor, Clark, Golder, "[Understanding Interaction Models: Improving Empirical Analyses](#)" (Political Analysis 14: 63-82)
- Bear Braumoeller, "[Hypothesis Testing and Multiplicative Interaction Terms](#)" *International Organization*

[Reference \[do not read now\]: Kousser's lecture notes on Interactions in Clarify](#)

Mar 11

Probably finishing what we've left undone from the above.

Mar 18, 25 and April 8 (NO class April 1): Topics To Be Negotiated

Assignment 4 DUE April 11.

Maximum likelihood estimation & Logit.

- Ch 17.1
- KW sec 11.4
- Donald Green "Maximum Likelihood for the Masses" and other notes emailed to you
- http://www.ats.ucla.edu/stat/stata/seminars/stata_vibl/default.htm

- [Fearon and Laitin, "Ethnicity, Insurgency, and Civil War", APSR 2003](#)
- If you want to push it further: Ch. 17 [all]

Maximum Likelihood: Selection bias, Censoring, Count Models, etc.

- Ch. 9
- Irfan Nooruddin, "[Modeling Selection Bias in Studies of Sanctions Efficacy](#)"
or [Shannon Lindsey Blanton "Promoting Human Rights and Democracy in the Developing World: U.S. Rhetoric versus U.S. Arms Exports" AJPS 2000, pp. 123-131.](#)
- [Slides on censoring](#)

Time Series and Time-Series-Cross-Section Data

- Ch. 11 & 13
- KW sec 11.7
- [Bradley et al. "Distribution and Redistribution in Postindustrial Democracies" *World Politics*](#)
or [Margit Tavits, "Clarity of Responsibility and Corruption", AJPS 2007](#)

Instrumental Variables and Causal Inference

- Ch. 15 & 16

April 18: Paper Due for Comments

April 21: Research Presentations and Final Paper Due