POL222H1F
Introduction to Quantitative Reasoning I
Summer 2023
MW 2-4 pm, SS 1087

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Student Hours: MW 4–5 pm , SS 3044

Teaching Assistants:

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Overview and Objectives

Political Science is an empirical discipline. This means that we apply the scientific method to generate and test theories about how the political world works, in order to improve our understanding of political phenomena. In this class, you will learn the tools necessary to think like a researcher.

In particular, you will learn to generate and apply abstract theories, derive and identify specific conditions under which predictions from these theories should hold, and design studies to evaluate whether these hypotheses are supported. This means that, rather than thinking of every election, war, economic crisis, or other political outcome of interest as unique events, you will learn how to investigate which characteristics systematically make outcomes more or less likely. The principles of scientific research design learned in this class will help you better understand what you read and learn in other classes, assist in making you a more critical consumer of (political) information, as well as develop marketable skills for the future.

Learning Outcomes

At the end of the course, students should be able to:
- Students will explain the fundamentals of applying the scientific model to social science research.
- Students will identify the key elements of a theory and hypothesis testing.
- Students will describe basic tenants of measuring and describing data.
- Students will demonstrate an understanding of appropriately testing social science hypotheses.

Required Texts

Kellstedt, Paul M. and Guy D. Whitten. 2018. *The Fundamentals of Political Science Research*, 3rd edition. NY: Cambridge University Press

Grading

Grades are based on 2 assessments (30% each), 3 homework assignments (10%, 5% and 5%), and in-class participation (20%). All readings are required to be completed prior to class. Assignments are required to be uploaded to Quercus; late assignments are penalized 10 percentage points of grade per day (including weekends).

Tutorials

In tutorials, students will review the material covered in class, discuss the key concepts, and ask any clarification questions. Attendance and participation in tutorials is required and contributes to the participation grade in the course.

Course Policies

Student Responsibilities in the Learning Process: Students are expected to complete any assigned readings prior to completing that topic's assessment. Students are also expected to complete all assessments on time. This means accessing the materials with sufficient time to complete assessments prior to deadlines. In the event that a student has questions concerning the material, they should formulate specific questions to ask the professor via office hours or email with sufficient time for a response prior to assessment deadlines (i.e. emailed questions should be sent at least 24 hours prior to a deadline, excluding weekends).

Classroom Conduct: Students are expected to participate in class in a thoughtful and respectful manner while in the pursuit of knowledge accumulation. Generally, this means engaging with one another's ideas and treating others as you would like to be treating as well as *not* treating others how you would *not* like to be treated. Please see university policies on freedom of speech (`https://governingcouncil.utoronto.ca/secretariat/policies/freedom-speech-statement-may-28-1992`) and discrimination and harassment (`https://governingcouncil.utoronto.ca/secretariat/policies/harassment-statement-prohibited-discrimination-and-discriminatory-harassment`).

Accommodations: Please discuss any special needs with the instructor start of the semester, for example, to request reasonable accommodations if an academic requirement conflicts with your religious practices and/or observances. Those seeking accommodations based on disabilities should complete the appropriate documentation with Student Life Programs and Services (`https://studentlife.utoronto.ca/department/accessibility-services/`).

Academic Misconduct: All acts of dishonesty in any work constitute academic misconduct. The Student Disciplinary Regulations (`https://governingcouncil.utoronto.ca/secretariat/policies/code-behaviour-academic-matters-july-1-2019`) will be followed in the event of academic misconduct.
A special note on plagiarism: plagiarism is the act of representing directly or indirectly another person's work as your own. It can involve presenting someone's speech, wholly or

partially, as your; quoting without acknowledging the true source of the quoted material; copying and handing in another person's work with your name on it; and similar infractions. Even indirect quotations, paraphrasing, etc., can be considered plagiarism unless sources are properly cited.

Copyright: Course materials, including recorded lectures and slides, are the instructor's intellectual property covered by the Copyright Act, RSC 1985, c C-42. Course materials posted on Quercus or the class website may not be posted to other websites or media without the express permission of the instructor. Unauthorized reproduction, copying, or use of online recordings will constitute copyright infringement.

I reserve the right to modify the syllabus to reflect the pace of the course.

Course Outline

Week 1: Introduction and Theory Construction

Reading: K&W Ch 1 and 2.

Optional reading:

- *FiveThirtyEight*. Mohawks, Faux-hawks And Macklemores: The Top-Heavy Hairdos of the World Cup. Available on Canvas.
- Clarke, Kevin A., and David M. Primo. 2007. Modernizing Political Science: A Model-based Approach. *Perspectives on Politics* 5(4): 741–753.

Week 2: Theory Construction and Causality

Reading: K&W Ch 2 and 3.

Homework 1: Yard Sign handout (available on Quercus) due Friday, May 19 at midnight.

Optional reading:

- Bueno De Mesquita, Bruce, James D. Morrow, Randolph M. Siverson, and Alastair Smith. 1999. An Institutional Explanation of the Democratic Peace. *American Political Science Review* 93(4): 791–807.
- Penn, Elizabeth Maggie, 2008. Citizenship Versus Ethnicity: The Role of Institutions in Shaping Identity Choice. *Journal of Politics* 70(4): 956–973.
- Sartori, Anne E. 2002. The Might of the Pen: A Reputational Theory of Communication in International Disputes. *International Organization* 56(1): 121–149.

Week 3: Understanding Causality Cont'd

May 22–No Class, Victoria Day

Reading: K&W Ch 3.

Optional reading:

- Campbell, Donald T. and H. Laurence Ross. 1968. The Connecticut Crackdown on Speeding: Time-Series Data in Quasi-Experimental Analysis. *Law & Society Review* 3(1):333–54.
- McNulty, John E., Conor M. Dowling, and Margaret H. Ariotti. 2009. Driving Saints to Sin: How Increasing the Difficulty of Voting Dissuades Even the Most Motivated Voters. *Political Analysis* 17(4): 418–434.
- Signorino, Curtis S. 2003. Structure and Uncertainty in Discrete Choice Models. *Political Analysis* 11(4): 316–344.

Week 4: Midterm and Research Design

Midterm Exam In-Class, Wednesday, May 31

Reading: K&W Ch 4.

Optional reading:
- Braumoeller, Bear F., and Gary Goertz. 2000. The Methodology of Necessary Conditions. *American Journal of Political Science* 44(4): 844-858.
- Chyzh, Olga. 2014. Can You Trust a Dictator: A Strategic Model of Authoritarian Regimes' Signing and Compliance with International Treaties. *Conflict Management and Peace Science* 31(1): 3–27.
- Gibler, Douglas M., and Scott Wolford. 2006. Alliances, then Democracy: An Examination of the Relationship between Regime Type and Alliance Formation. *Journal of Conflict Resolution* 50(1): 129–153.

Week 5: Measurement

Homework 2: Political Participation handout (available on Quercus) due Friday, June 9 at midnight.

Reading: K&W Ch 5;

Optional reading:
- Palmer, Glenn, Vito D'Orazio, Michael Kenwick, and Matthew Lane. 2015. The MID4 Dataset, 2002-2010: Procedures, Coding Rules, and Description. *Conflict Management and Peace Science* 32(2): 222–242.
- Nieman, Mark and Jon Ring. 2015. The Construction of Human Rights: Accounting for Systematic Bias in Common Human Rights Measures. *European Political Science* 14(4):473–495.
- Jurkovich, Michelle. 2019. What Isn't a Norm? Redefining the Conceptual Boundaries of "Norms" in the Human Rights Literature. *International Studies Review* `https://doi.org/10.1093/isr/viz040`.

Week 6: Descriptive Statistics

Reading: K&W Ch 6;

Homework 3 due Monday, June 19 at midnight.

Optional reading:

- Gleditsch, Nils Petter, Peter Wallensteen, Mikael Eriksson, Margarata Sollenberg, and Håvard Strand. 2002. Armed Conflict 1946-2001: A New Dataset. *Journal of Peace Research* 39(5): 615–637.
- Lo, James, Sven-Oliver Proksch, and Thomas Gschwend. 2014. A Common Left-Right Scale for Voters and Parties in Europe. *Political Analysis* 22(2): 205–223.
- Westbrooke, Ian. 1998. Simpson's Paradox: An Example in a New Zealand Survey of Jury Composition. *Chance* 11(2): 40–42.

Week 7: Wrap-Up

Last class is Monday, June 19.

Final Examination: Time and Location TBA