Political Science 680: Seminar in Behavioral Research Design

Fall 2023
Tuesday 10am-1pm EST
049 UM Museum of Art (lower level)

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Office hour information is listed on the Canvas website
We are like sailors who on the open sea must reconstruct their ship but are never able to start afresh from the bottom. Where a beam is taken away a new one must at once be put there, and for this the rest of the ship is used as support. In this way, by using the old beams and driftwood the ship can be shaped entirely anew, but only by gradual reconstruction. (Otto Neurath).

Introduction

This class will provide graduate students with an introduction to the scientific method and an overview of how to apply it to the study of politics. Students will learn the fundamentals of the scientific method and, through research design, how to improve both causal inference and the measurement of political phenomena.

Course Objectives

Our goal is to develop abstract, portable standards for data worth collecting along with a practical sense of how one might go about collecting those data. The breadth of topics is intended to help students of Political Science and related fields in social science to advance their own inquiry.

Optimally, the written work you do in this class will advance a research design that might contribute to your own research program, either as part of your dissertation or a significant side project that could lead to publication if executed. You will need to justify the work you want to do intellectually and practically in order to receive financial support for collecting data. Also, one of your most important jobs in academia will be in giving helpful advice to colleagues and students about their own work, regardless of topic. We hope this course is also of value for mastering that skill.

A significant theme of the course will be the crafting of grant proposals to generate support for the projects you hope to do in the future. Grant writing has some unique features relative to standard academic writing that are normally learned over the course of many years and rarely perfected before tenure. All research domains can be enhanced with support for better data collection, better research assistance, and uninterrupted writing time. Learning to write grant proposals in grad school is highly advantageous.

The course will be run partly as a lecture course and partly as a seminar. We will review basic ideas and arguments relevant to each week’s topic, while also encouraging discussion and Q&A. Its success depends on all of us. Please make sure you try to chime in whenever you are able. The course is in person.

It is as important to build on and listen to what others have to say as it is to say things yourself. If you’re not contributing in class much, we will try to call on you to help things along. If you interrupt others or don’t give others a chance to speak, we will try to ask you to pause. This is very rare. Pay attention to your role in creating a productive discussion. The hours we have together go quickly. You are welcome to come talk to either of us during office hours about any aspect of your research program.

Required Reading Material

• Additional articles and chapters are listed below in the Lecture Readings and Discussion Readings subsections. Access to these readings will be located on the course Canvas page at the following link: https://umich.instructure.com/courses/618516

• Items listed in the "Suggested Readings and Suggested Books subsections are not required.

Class Requirements

(1) Assignments: Four Controversies/problem sets due periodically in class. Each will be worth 7% of your final grade. (28%)
(2) 4-page draft/outline on the topic of your grant proposal, due on Friday, November 10 at 5pm via Canvass. (12%)
(3) Workshopping the Grant Proposal: Submitting a revised version of the draft for discussion with the class (10%)
(4) Grant Proposal: outlines an interesting and researchable question and sets out a detailed, step by step plan for answering that question, 15-20 double-spaced pages. This should include all the major sections of a standard NSF proposal, though it need not be an NSF proposal per se. Multi-method proposals are welcome. Due in electronic form (in the Canvas Assignments) by 4 p.m. on Friday, December 15th. No late papers please. (35%)
(5) Class participation. Weekly discussion, and feedback for each other’s projects. (15%)
Summary of Class Schedule

Validity Focus: The Five Validities (Deductive Validity, Construct/Measurement Validity, Internal Validity, External Validity, Conclusion/Inferential Validity)
- Week 1: Introduction to the Scientific Method

Validity Focus: Deductive Validity
- Week 2: Inferences from Logical Evidence in Formal Designs

Validity Focus: Construct/Measurement Validity
- Week 3: Measurement Theory- Explication and the Modeling of Unobservable Concepts
- Week 4: Validity and Reliability in Measurement
- Week 5: Writing Good Questions- Surveys as Conversations
- Week 6: Analyzing Content

Validity Focus: Internal Validity
- Week 7: True Experiments
- Week 8: **No Class for Fall Break**
- Week 9: Quasi- and Natural Experiments
- Week 10: Specific Quasi-Experimental Designs

Validity Focus: External Validity
- Week 11: Sampling
- Week 12: Ecological Validity

Validity Focus: Building Linkages Across Validity Types
- Week 13: Observational Designs- Statistically Modeling the Assignment Process
- Week 14: The Comparative Method, Fieldwork, and Archival Analysis

Validity Focus: Conclusion/Inferential Validity
- Week 15: Workshopping Grant Proposals
- Week 16: Workshopping Grant Proposals
Validity Focus: The Five Validities (Deductive Validity, Construct/Measurement Validity, Internal Validity, External Validity, Conclusion/Inferential Validity)

Week 1: Introduction to the Scientific Method (Aug. 29)

Lecture Readings:
- Trochim and Donnelly. Ch 1: “Foundations.”

Discussion Readings:
- "Being a Good Scientist" Brief interview with Alex Guazzelli, Director of Machine Learning in Amazon’s Customer Trust and Partner Support unit (link on Canvas)

Suggested Readings:

Validity Focus: Deductive Validity

Week 2: Inferences from Logical Evidence in Formal Designs (Sept. 5)

Lecture Readings:
Discussion Readings:

Suggested Readings:

Validity Focus: *Construct/Measurement Validity*

Week 3: Measurement Theory- Explication and the Modeling of Unobservable Concepts (Sept. 12)

Lecture Readings:

Discussion Readings:

Suggested Readings:
- Kerner, Andrew. 2014. “What are we talking about when we are talking about FDI” *International Studies Quarterly* 58(4): 804-815.

**Assignment 1 Due Friday: Controversies in Measurement (due Friday of this week)**

**Week 4: Validity and Reliability in Measurement (Sept. 19)**

**Lecture Readings:**

**Discussion Readings:**

**Suggested Readings:**

**Week 5: Writing Good Questions- Surveys as Conversations (Sept. 26)**

**Lecture Readings:**

**Discussion Readings:**

**Suggested Readings:**
- Trochim and Donnelly. Ch 4: “Survey Research."
Assignment 2 Due Friday: Writing Survey Questions

Week 6: Analyzing Content (Oct. 3)

Lecture Readings:

Discussion Readings:

Suggested Readings:

Validity Focus: *Internal Validity*

Week 7: True Experiments (Oct. 10)

Lecture Readings:
- Trochim and Donnelly. Ch 6: "Design", Ch 7: "Experimental Design."


Discussion Readings:


Suggested Readings:


Assignment 3 Due Friday: Review design vignettes, discuss challenges to inference
Week 8: **No Class for Fall Break** (Oct. 17)

Week 9: Quasi- and Natural Experiments (Oct. 24)

Lecture Readings:
- Trochim and Donnelly. Ch 8: “Quasi-Experimental Design.”

Discussion Readings:

Suggested Readings:

Week 10: Specific Quasi-Experimental Designs- Interrupted Time-Series, Regression Discontinuity, Matching, and Instrumental Variables (Oct. 31)

Lecture Readings:
- Trochim and Donnelly. Ch 9: “Advanced Design Topics.”

Discussion Readings:
• Markowitz, Jonathan N. “Arctic Shock: Utilizing the Exogenous Shock of Climate Change to Test Competing Theories of Resource Competition” Journal of Conflict Resolution.

Suggested Readings:
• Snyder, James M., Olle Folke, and Shigeo Hirano. 2015. “Partisan Imbalance in Regression Discontinuity Studies Based on Electoral Thresholds” Political Science Research and Methods 3(2):169-186.

Validity Focus: External Validity

Week 11: Ecological Validity (Nov. 7)

Lecture Readings:
• Fariss, Christopher J. and Zachary M. Jones. 2018. “Enhancing External Validity in Observational Settings When Replication is Not Possible” Political Science Research and Methods 6(2):365-380.

Discussion Readings:
• Coppock, Alexander, and Donald P. Green. 2015. “Assessing the Correspondence between Experimental Results Obtained in the Lab and Field: A Review of Recent Social Science Research” Political Science Research and Methods 3(1):113-131.

Suggested Readings:

Draft (4 page) Grant Proposal Due Friday, November 10 at 5pm

Week 12: Sampling (Nov. 14)

Lecture Readings:
• Trochim and Donnelly. Ch 2: “Sampling”
Discussion Readings:


Suggested Readings:


Validity Focus: *Building Linkages Across Validity Types*

Week 13: Observational Designs- Statistically Modeling the Assignment Process (Nov. 21)

Lecture Readings:


Discussion Readings:


Suggested Readings:


**Assignment 4 Due Sunday, Nov. 26 (extension due to Thanksgiving): Controversies in Case Selection**

**Week 14: The Comparative Method, Fieldwork, and Archival Analysis (Nov 28)**

**Lecture Readings:**

**Discussion Readings:**

**Suggested Readings:**
• Seawright, Jason. 2016. Multi-Method Social Science Combining Qualitative and Quantitative Tools Cambridge University Press.


Trochim and Donnelly. Ch 5: “Qualitative and Unobtrusive Measures”.

**Suggested Podcasts:**

Driscoll, Jesse and Christian Davenport. *Raiders Of The Lost Archive*. Podcasts available on several podcast platforms including Spotify, Amazon, Podbean, and iheart (there are currently 21 episodes that each last 30-60+ minutes; please select any or all).

**Validity Focus: Conclusion/Inferential Validity**

Week 15: Workshopping Grant Proposals (Dec. 5)

Week 16: Pizza Party with Workshopping (Evening session Dec. 12, 411 West Hall)

**Final Grant Proposal Due Friday, Dec. 15**

**OUTRIGGER MATERIAL: Finding the Research Frontier: The Scientific Method Revisited**

**Suggested Readings:**

- Przeworski, Adam, ‘ Is the Science of Comparative Politics Possible?’; in Carles Boix, and Susan C. Stokes (eds), The Oxford Handbook of Comparative Politics (2009; online edn, Oxford Academic, 2 Sept. 2009), [https://doi.org/10.1093/oxfordhb/9780199566020.003.0006](https://doi.org/10.1093/oxfordhb/9780199566020.003.0006)

**Additional Course Information**

**Student Mental Health and Wellbeing**

The University of Michigan is committed to advancing the mental health and wellbeing of its students. If you or someone you know is feeling overwhelmed, depressed, and/or in need of support, services are available.

For help, contact Counseling and Psychological Services (CAPS) at (734) 764-8312 and https://caps.umich.edu/ during and after hours, on weekends and holidays, or through its counselors physically located in schools on both North and Central Campus.

You may also consult University Health Service (UHS) at (734) 764-8320 and https://www.uhs.umich.edu/mentalhealthsvcs, or for alcohol or drug concerns, see www.uhs.umich.edu/aodresources.

For a listing of other mental health resources available on and off campus, visit: http://umich.edu/mhealth/.

**Accommodations for Students with Disabilities**

If you think you need an accommodation for a disability, please let us know at your earliest convenience. Some aspects of this course, the assignments, the in-class activities, and the way the course is usually taught may be modified to facilitate your participation and progress. As soon as you make us aware of your needs, we can work with the Services for Students with Disabilities (SSD) office to help us determine appropriate academic accommodations. SSD (734-763-3000; http://ssd.umich.edu) typically recommends accommodations through a Verified Individualized Services and Accommodations (VISA) form. Any information you provide is private and confidential and will be treated as such.

**Religious and Academic Conflicts**

Although the University of Michigan, as an institution, does not observe religious holidays, it has long been the University’s policy that every reasonable effort should be made to help students avoid negative academic consequences when their religious obligations conflict with academic requirements. Absence from classes or examinations for religious reasons does not relieve students from responsibility for any part of the coursework required during the period of absence. Students who expect to miss classes, examinations, or other assignments as a consequence of their religious observance shall be provided with a reasonable alternative opportunity to complete such academic responsibilities.

It is the obligation of students to provide faculty with reasonable notice of the dates of religious holidays on which they will be absent. Such notice must be given by the drop/add deadline of the given term. Students who are absent on days of examinations or class assignments shall be offered an opportunity to make up the work, without penalty, unless it can be demonstrated that a make-up opportunity would interfere unreasonably with the delivery of the course. Should disagreement arise over any aspect of this policy, the parties involved should contact the Director of Undergraduate Studies/Director of Graduate Studies. Final appeals will be resolved by the Provost.

**Students Representing the University of Michigan**
There may be instances when students must miss class due to their commitment to officially represent the University. These students may be involved in the performing arts, scientific or artistic endeavors, or intercollegiate athletics. Absence from classes while representing the University does not relieve students from responsibility for any part of the course missed during the period of absence. Students should provide reasonable notice for dates of anticipated absences and submit an individualized class excuse form.

**Academic Integrity**

The LSA academic community, like all communities, functions best when its members treat one another with honesty, fairness, respect, and trust. The College holds all members of its community to high standards of scholarship and integrity. To accomplish its mission of providing an optimal educational environment and developing leaders of society, the College promotes the assumption of personal responsibility and integrity and prohibits all forms of academic dishonesty and misconduct. Academic dishonesty may be understood as any action or attempted action that may result in creating an unfair academic advantage for oneself or an unfair academic advantage or disadvantage for any other member or members of the academic community. Conduct, without regard to motive, that violates the academic integrity and ethical standards of the College community cannot be tolerated. The College seeks vigorously to achieve compliance with its community standards of academic integrity. Violations of the standards will not be tolerated and will result in serious consequences and disciplinary action.

**Grade Grievances**

If you believe a grade you have received is unfair or in error, you will need to do the following: Wait 24 hours after receiving the grade before approaching your instructor. Provide an explanation in writing for why the grade you received was unfair or in error. If you believe the instructor’s response fails to address your claim of unfairness or error, you may petition the department’s Director of Undergraduate Studies at the latest within the first five weeks of classes following the completion of the course. You must convey in writing the basis for the complaint, with specific evidence in support of the argument that the grade either was given in error or was unfairly determined. This formal complaint also should summarize the outcome of the initial inquiry to the course instructor, indicating which aspects are in dispute. Within three weeks of the receipt of the petition, the DUS will determine whether to convene the Undergraduate Affairs Committee, the student, and the instructor(s) for a formal hearing. Further details on this process are included on the department website under Advising > Contesting a Grade.

**Resources for Harassment**

Title IX makes it clear that violence and harassment based on sex and gender, including violence and harassment based on sexual orientation, are a Civil Rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, etc. If you or someone you know has been harassed or assaulted, you can find the appropriate resources here: [www.bw.edu/resources/hr/harass/policy.pdf](http://www.bw.edu/resources/hr/harass/policy.pdf). For information about help and resources at University of Michigan please contact the Sexual Assault Prevention and Awareness Center (SAPAC) [https://sapac.umich.edu/SupportServices](https://sapac.umich.edu/SupportServices); 734-764-7771; or sapac@umich.edu. For information about filing a report or complaint with the Title IX office at the University of Michigan see [https://sexualmisconduct.umich.edu/reporting-process/reporting-to-the-university/](https://sexualmisconduct.umich.edu/reporting-process/reporting-to-the-university/). Please note that Title IX offices often distinguish between making a “report,” which does not launch an investi-gation, and filing a “complaint,” which does.
Language and Gender

“Language is gender-inclusive and non-sexist when we use words that affirm and respect how people describe, express, and experience their gender. Just as sexist language excludes women's experiences, non-gender-inclusive language excludes the experiences of individuals whose identities may not fit the gender binary, and/or who may not identify with the sex they were assigned at birth. Identities including trans, intersex, and genderqueer reflect personal descriptions, expressions, and experiences. Gender-inclusive/non-sexist language acknowledges people of any gender (for example, first year student versus freshman, chair versus chairman, humankind versus mankind, etc.). It also affirms non-binary gender identifications, and recognizes the difference between biological sex and gender expression. Teachers and students should use gender-inclusive words and language whenever possible in the classroom and in writing. Students, faculty, and staff may share their preferred pronouns and names, either to the class or privately to the professor, and these gender identities and gender expressions should be honored.” For more information: www.wstudies.pitt.edu/faculty/gender-inclusivenon-sexist-language-syllabi-statement.