

PSCI 8355 – Research Design

Vanderbilt University
Spring 2022

Instructor:	Guillermo Toral (he/him)	Meeting time:	Monday 2.15 – 4.45pm
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Office:	Commons 359	Course page:	Brightspace link
Office hours:	Monday 5 – 7pm , or by appt.		

1 Course description

This course provides a graduate-level overview of research design in political science. We will explore some fundamental tasks of political science research that cut across epistemological traditions and methodological approaches. These fundamental research tasks include building an argument, conceptualization, measurement, case selection, causal inference, descriptive inference, predictive inference, formal modeling, fieldwork, ethical conduct, and communicating results.

Through readings, assignments, and in-class discussions and exercises, students will develop their research design skills and apply them to a substantive research project of theirs, for which they will produce a grant proposal and a research design.

The sections below detail the course's [learning objectives](#), [expectations](#), and [schedule](#). A final section reminds students about important [campus resources](#).

2 Learning objectives

By the end of the semester, students should be able to:

1. Reflect on fundamental issues of research design in political science, with reference to both theoretical and applied debates in the discipline.
2. Analyze the merits and drawbacks of alternative research designs, and suggest strategies for improving them.
3. Productively participate in discussions about research design, with respect for others, ability to engage with different points of view, and synthesis capacity.
4. Propose original, credible, and robust research designs to address relevant political science questions.

3 Course expectations

3.1 Prerequisites

This class assumes that students have some prior exposure to political science at the graduate level, including graduate-level training in quantitative research methods.

3.2 Requirements

Participation and mastery of the material (25%). Students are expected to attend all sessions and *actively* participate in the discussions and activities therein. In-class discussions are designed to help students assimilate key concepts, connect ideas, and build their ability to propose and critique research designs. In so doing, participation will help students achieve all learning objectives (starting with learning objective 3). Actively participating in class requires doing the readings in advance.

Presentation (10%). Once during the semester, each student will do a 10-minute presentation of the week's applied reading (marked with * below), and lead a discussion of its research design and how it relates to the more theoretical readings. The presentation should demonstrate thoughtful and insightful engagement with the material. Each student will be assigned a week to present, after taking into account their preferences. The presentation should be supported by slides, which are to be submitted on Brightspace. This assignment will help students achieve learning objective 2.

IRB certification (5%). Students are expected to complete the Vanderbilt IRB training, and to submit their final certificate on Brightspace. More information about Vanderbilt's Human research protections program can be found [here](#), and the training itself can be accessed through the [Citi program](#). Students should register as affiliates of Vanderbilt University, select the "Basic training" corresponding to "Group 2: Social and behavioral research." Students who have completed the training in the past may simply submit their certificate, as long as it is current. If it has expired they may need to do a refresher course through Citi in order to obtain an up-to-date certificate. The ethics training is required for professional-level research engaging human subjects, and will help students achieve all learning objectives.

Grant proposal (20%). Students are expected to write a proposal for a major dissertation grant program of their choice. Examples of dissertation grants include the [NSF Graduate Research Fellowship](#) and the [SSRC International Dissertation Research Fellowship](#). Students who want to write a proposal for a grant program different than these two should clear it with me first. This assignment requires becoming familiar with the grant program and the application requirements. Proposals should follow the funder's length and format requirements. Students are strongly encouraged to also submit their grant proposal to the corresponding funding entity when the application window opens. Students who have already applied to one of these grants are encouraged to work on a proposal for a different grant program. This assignment will help students achieve learning objective 4. Students should consult the following materials (available on Brightspace) before writing their proposals:

- Przeworski, Adam, and Frank Salomon. "On the art of writing proposals: Some candid suggestions for applicants to Social Science Research Council competitions." SSRC, 1995 (8 pages).
- Sohn, Emily. "Secrets to writing a winning grant." *Nature* 577 (2020): 133-135 (3 pages).
- Altman, Micah. "Funding, funding." *PS: Political Science Politics* 42.3 (2009): 521-526 (6 pages).

Research design (40%). Students are expected to work progressively throughout the semester on an original research design. The design should ideally be related to students' dissertation projects and/or second year papers. The design should focus entirely on matters of theory and empirical design, rather than on the actual implementation of the analyses. The design may however present (in the main text or in an appendix) the results of preliminary or exploratory analyses if they are directly relevant to issues of research design. Submissions should be between 5,000 and 7,000 words long, excluding references and appendices. They should follow the format of a research paper with no results section, with a strong emphasis on discussions of research design. In order to help students make progress toward the final submission, there will be two intermediate deliverables.

First, students will meet with me individually during the month of February to discuss their project. Second, students will submit a shorter draft (between 2,500 and 3,500 words) mid-way through the semester. This assignment will help students achieve learning objectives 1, 2 and 4.

3.3 Grading

Grading scale. Assignments will be graded in a 0-100 scale. Students who do not submit a given assignment will receive a 0 for it. Final numeric grades will be calculated through a simple weighted average, using the weights detailed in 3.2, and then transformed to letter grades using the following system: 94 or above → A; 90 to 93.99 → A-; 87 to 89.99 → B+; 83 to 86.99 → B; 80 to 82.99 → B-; 77 to 79.99 → C+; 73 to 76.99 → C; 70 to 72.99 → C-; 67 to 69.99 → D+; 63 to 66.99 → D; 60 to 62.99 → D-; 59.99 or below → F.

Late submission policy. Assignments submitted after the deadline will incur in an automatic penalty. 10 points will be deducted if the delay is shorter than 24 hours, 20 if it is between 24 and 48 hours, and so on. Students who submit any assignment late due to extenuating circumstances may send me an email, with documentation for the delay's motives, to request a penalty waiver. Such requests should be sent in advance whenever possible.

Grade revisions. If a student is unhappy with their grade on an assignment, they should feel free to email me or come to office hours. I am happy to explain the grade and suggest ways to get a better grade next time around. Students may also request a review of any graded assignment. To do so, they must send me an email with a reasoned argument to motivate the request no later than 3 days after the assignment has been returned. I will examine the argument and determine whether the grade should be revised. As a result of the review, the grade may be raised, lowered, or left unchanged. Any revised grades will be final.

3.4 Important dates

These are the course's most important deadlines. All hours are in Nashville time (CT).

Preferences for discussion-lead paper due	January 28, 11.59pm
Draft research design due	March 14, 11.59pm
(Optional) Draft grant proposal due	March 21, 11.59pm
Grant proposal due	April 4, 11.59pm
IRB certification due	April 11, 11.59pm
Final research design due	May 6, 11.59pm

3.5 Academic integrity

While students are allowed (and indeed encouraged) to discuss the readings and their ideas with each other, all submitted work must be entirely individual and use standard citation practices. Any case of plagiarism or other forms of academic dishonesty would be taken very seriously, in agreement with Vanderbilt policy.

3.6 Diversity and inclusion

I am committed to making this course a safe and productive learning environment for all students, regardless of gender, race, ethnicity, country of origin, sexual orientation, gender identity, abilities, or religion. I see people's diverse backgrounds and worldviews not merely as differences to tolerate but as valuable assets to recognize and celebrate. When in the classroom, I expect students to treat each other with kindness, openness, and respect.

Any student who feels they need an accommodation based on the impact of a disability should email me as soon as possible to discuss their needs. We will work with Vanderbilt's [Student Access Services](#) to accommodate their needs.

3.7 One-on-one support

Students are welcome to meet with me to discuss any questions or concerns they may have. I hold office hours on Monday between 5 and 7pm over Zoom – to sign up, simply choose an available slot at www.calendly.com/guillermo-toral/office-hours. Students who cannot find a slot that suits them should feel free to email me so we can find an alternative time. Students are also welcome to email me with any questions or concerns; I typically respond within 48 hours.

3.8 Brightspace and syllabus

The course's Brightspace page is <https://brightspace.vanderbilt.edu/d2l/home/351468>. I will post readings and grades on Brightspace. All assignments will be submitted through Brightspace. This syllabus remains the main guiding document for the class. I reserve the right to amend the syllabus throughout the semester, but I will alert students of any changes should they be necessary. This version of the syllabus is dated January 24, 2022.

4 Schedule and readings

We will be reading both classic and more recent pieces on central aspects of research design in political science, as well as (in weeks 4-10) applied work published recently in the *American Political Science Review*. All required readings will be available on Brightspace. I expect students to do all required readings and to reflect about them before class, and to come prepared to discuss them in depth.

Below are some key questions to consider while reading the applied papers (which are marked with ✱ below) and to prepare for in-class discussions:

- *On theory*. How compelling is the author's theory? Is it internally consistent? How is it different from, or how does it contradict, other important theories? Ultimately, what is at stake? What other theories could the author's argument be connected to? How specific is the theory with regards to mechanisms? Is the theory lacking necessary scope conditions?
- *On empirics*. To what extent is the empirical case chosen by the author adequate to test their theory? Are the empirical measures well aligned with the theory and valid? How appropriate is the research design to test the author's claims? Is there evidence in support of important assumptions of the design? Is the evidence internally valid and compelling? What potential concerns could one raise, and what kinds of empirical evidence would assuage them? Are there parts of the theory that are not sufficiently tested? Is there evidence in support of the theorized mechanisms? What other empirical implications of the theory could be tested?
- *On implications*. How convinced are you that the authors' conclusions or implications are granted, given their empirical evidence? Do their findings suggest other implications (for theory, methods, or policy) that the authors do not consider? Based on this contribution, what would be promising avenues for future research?

4.1 Introductions (January 24)

- No readings for this week.

4.2 Fundamentals of research design (January 31)

- Weber, Max. "Science as a vocation." In *Max Weber's complete writings on academic and political vocations*. Algora, 2008 [1917] (27 pages).
- King, Gary, Robert O. Keohane, and Sidney Verba. *Designing social inquiry: Scientific inference in qualitative research*. Princeton University Press, 1994. Chapter 1 (31 pages).
- Mahoney, James, and Gary Goertz. "A tale of two cultures: Contrasting quantitative and qualitative research." *Political Analysis* 14.3 (2006): 227-249 (20 pages).
- Blair, Graeme, Alexander Coppock, and Macartan Humphreys. *Research design: Declaration, diagnosis, redesign*. Princeton University Press, forthcoming. Chapters 1, 2, 3, and 20 (22 pages).

4.3 Building an argument (February 7)

- Gerring, John. *Social science methodology: A unified framework*. Cambridge University Press, 2012. Chapters 2 and 3 (48 pages).
- Van Evera, Stephen. *Guide to methods for students of political science*. Cornell University Press, 1997. Chapter 1 (43 pages).
- Eidlin, Fred. "The method of problems versus the method of topics." *PS: Political Science Politics* 44.4 (2011): 758-761 (4 pages).

4.4 Conceptualization (February 14)

- Sartori, Giovanni. "Concept misformation in comparative politics." *American Political Science Review* 64.4 (1970): 1033-1053 (21 pages).
- Goertz, Gary. *Social Science Concepts: A user's guide*. Princeton University Press, 2006. Chapter 1 (23 pages).
- Schaffer, Frederic Charles. *Elucidating social science concepts: An interpretivist guide*. Routledge, 2015. Chapter 1 (25 pages).
- ★ Magaloni, Beatriz, Edgar Franco-Vivanco, and Vanessa Melo. "Killing in the slums: Social order, criminal governance, and police violence in Rio de Janeiro." *American Political Science Review* 114.2 (2020): 552-572 (20 pages).

4.5 Measurement (February 21)

- Gerring, John. *Social science methodology: A unified framework*. Cambridge University Press, 2012. Chapter 7 (40 pages).
- Adcock, Robert, and David Collier. "Measurement validity: A shared standard for qualitative and quantitative research." *American Political Science Review* 95.3 (2001): 529-546 (16 pages).

- Seawright, Jason, and David Collier. “Rival strategies of validation: Tools for evaluating measures of democracy.” *Comparative Political Studies* 47.1 (2014): 111-138 (21 pages).
- ★ Wuttke, Alexander, Christian Schimpf, and Harald Schoen. “When the whole is greater than the sum of its parts: On the conceptualization and measurement of populist attitudes and other multidimensional constructs.” *American Political Science Review* 114.2 (2020): 356-374 (17 pages).

4.6 Case selection (February 28)

- Geddes, Barbara. *Paradigms and sand castles: Theory building and research design in comparative politics*. University of Michigan Press, 2003. Chapter 3 (40 pages).
- King, Gary, Robert O. Keohane, and Sidney Verba. *Designing social inquiry: Scientific inference in qualitative research*. Princeton University Press, 1994. Chapter 4 (34 pages).
- Pritchett, Lant, and Justin Sandefur. “Learning from experiments when context matters.” *American Economic Review: Papers and Proceedings* 105.5 (2015): 471-75 (4 pages).
- ★ Holland, Alisha C. “Forbearance.” *American Political Science Review* 110.2 (2016): 232-246 (14 pages).

4.7 Causal inference (March 14)

- Brady, Henry E. “Causation and Explanation in Social Science.” In Box-Steffensmeier, Janet M., Henry E. Brady, and David Collier, eds. *The Oxford handbook of political methodology*. Oxford, 2008 (51 pages).
- Gerring, John. *Social science methodology: A unified framework*. Cambridge University Press, 2012. Chapter 8 (20 pages).
- Collier, David. “Understanding process tracing.” *PS: Political Science Politics* 44.4 (2011): 823-830 (6 pages).
- ★ Knox, Dean, Will Lowe, and Jonathan Mummolo. “Administrative records mask racially biased policing.” *American Political Science Review* 114.3 (2020): 619-637 (17 pages).

4.8 Descriptive inference (March 21)

- Gerring, John. “Mere description.” *British Journal of Political Science* 42.4 (2012): 721-746 (26 pages).
- Salganik, Matthew J. *Bit by bit: Social research in the digital age*. Princeton University Press, 2019. Chapter 2 (50 pages).
- ★ Fariss, Christopher J. “Respect for human rights has improved over time: Modeling the changing standard of accountability.” *American Political Science Review* 108.2 (2014): 297-318 (19 pages).

4.9 Predictive inference (March 28)

- Dowding, Keith, and Charles Miller. “On prediction in political science.” *European Journal of Political Research* 58.3 (2019): 1001-1018 (15 pages).
- Grimmer, Justin, Margaret E. Roberts, and Brandon M. Stewart. “Machine learning for social science: An agnostic approach.” *Annual Review of Political Science* 24 (2021): 395-419 (20 pages).

- Hofman, Jake M., et al. “Integrating explanation and prediction in computational social science.” *Nature* 595.7866 (2021): 181-188 (8 pages).
- ★ Mueller, Hannes, and Christopher Rauh. “Reading between the lines: Prediction of political violence using newspaper text.” *American Political Science Review* 112.2 (2018): 358-375 (17 pages).

4.10 Formal modeling (April 4)

- Ashworth, Scott, Christopher R. Berry, and Ethan Bueno de Mesquita. *Theory and credibility: Integrating theoretical and empirical social science*. Princeton University Press, 2021. Chapters 2, 3 and 4 (58 pages).
- Johnson, James. “Formal models in political science: Conceptual, not empirical.” *The Journal of Politics* 81.1 (2019): e6-e10 (5 pages).
- Lorentzen, Peter, M. Taylor Fravel, and Jack Paine. “Qualitative investigation of theoretical models: The value of process tracing.” *Journal of Theoretical Politics* 29.3 (2017): 467-491 (19 pages).
- ★ Graham, Matthew H., and Milan W. Svoblik. “Democracy in America? Partisanship, polarization, and the robustness of support for democracy in the United States.” *American Political Science Review* 114.2 (2020): 392-409 (17 pages).

4.11 Fieldwork (April 11)

- Kapiszewski, Diana, Lauren M. MacLean, and Benjamin L. Read. *Field research in political science: Practices and principles*. Cambridge University Press, 2015. Chapters 1 and 3 (69 pages).
- Schatz, Edward, ed. *Political ethnography: What immersion contributes to the study of power*. University of Chicago Press, 2013. Chapter 1 (20 pages).
- Jensenius, Francesca Refsum. “The fieldwork of quantitative data collection.” *PS: Political Science Politics* 47.2 (2014): 402-404 (3 pages).
- Krause, Peter, et al. “COVID-19 and Fieldwork: Challenges and Solutions.” *PS: Political Science Politics* 54.2 (2021): 264-269 (5 pages).

4.12 Ethical conduct of research (April 18)

- American Political Science Association. “Principles and guidance for human subjects research.” 2020 (20 pages).
- Salganik, Matthew J. *Bit by bit: Social research in the digital age*. Princeton University Press, 2019. Chapter 6 (45 pages).
- Fujii, Lee Ann. “Research ethics 101: Dilemmas and responsibilities.” *PS: Political Science Politics* 45.4 (2012): 717-723 (6 pages).
- Cronin-Furman, Kate, and Milli Lake. “Ethics abroad: Fieldwork in fragile and violent contexts.” *PS: Political Science Politics* 51.3 (2018): 607-614 (6 pages)
- Michelitch, Kristin. “Whose research is it? Political scientists discuss whether, how, and why we should involve the communities we study.” *PS: Political Science Politics* 51.3 (2018): 543-545 (3 pages).
- Desposato, Scott. “Subjects and scholars’ views on the ethics of political science field experiments.” *Perspectives on Politics* 16.3 (2018): 739-750 (9 pages).

4.13 Communicating results (April 25)

- Chaubey, Varanya. *The Little Book of Research Writing*. 2018. Chapters 1-3 (56 pages).
- Wilke, Claus O. *Fundamentals of data visualization: A primer on making informative and compelling figures*. O'Reilly Media, 2019. Chapter 29 (17 pages).
- Christensen, Garret, and Edward Miguel. "Transparency and reproducibility", in Elman, Colin, John Gerring, and James Mahoney, eds. *The Production of Knowledge: Enhancing Progress in Social Science*. Cambridge University Press, 2020 (68 pages).
- Anderson, Chris. "How to give a killer presentation." In *HBR's 10 must reads on public speaking and presenting*, Harvard Business Review, 2020 (14 pages).

5 Campus resources

5.1 Academic writing

Writing well is by no means an innate skill. It takes practice, feedback, and reflection to become a good writer. This class will provide students with an opportunity to improve their writing through those three channels. Additional support can be obtained from Vanderbilt's [Writing Studio](#), which provides useful materials and guides, as well as one-on-one consultations.

5.2 Mental health

Staying emotionally and mentally healthy is critical for personal, academic, and professional success. The ongoing public health, economic and political crises can make this more of a challenge. I encourage students who are struggling with any mental health issues, and/or want to build their emotional and mental wellbeing, to consider using the resources offered by the office of Vanderbilt's [Dean of Students](#), including the [University Counseling Center](#) and the [Center for Student Wellbeing](#). Any student who is dealing with difficulties that hinder their ability to succeed in this class should feel free to reach out to me by email or in office hours to discuss their situation.

5.3 Equity, diversity and inclusion

I am committed to making this class an open and inclusive environment for all. I am available to discuss matters of equity and diversity and will keep those conversations as confidential as possible. Students should be aware however that all faculty are "mandated reporters" who are legally obligated to report any allegations of sexual misconduct and any suspected discrimination to Vanderbilt's [Title IX Coordinator](#). In addition, Vanderbilt has a number of centers that can provide useful resources, including the [Office of Diversity, Equity and Inclusion](#), the [Black Cultural Center](#), the [Women's Center](#), and the [Office of LGBTQI Life](#).