

Research Design and Research Logic

Advanced Seminar for the 2026 Summer Term (14335.0703)¹

Instructor: E. Ece Özbey

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Office Hours: Monday, 15:00 – 17:00 (By appointment), Room 3.13c (IBW Building, Herbert–Lewin Str. 2, 3rd Floor) or Online

Modules: CM Research Design

Course Time & Place: Monday, 10:00 – 11:30

Kindly refer to the schedule provided below for details.

Room 3.40 (IBW Building, Herbert–Lewin Str. 2, 3rd Floor)

First and Last Sessions: April 13, 2026 – July 20, 2026

Course Overview

Typically, wherever there is a big fire, there are also firefighters. Should we consider shutting down all fire stations as a preventive measure against future outbreaks? Similarly, there is data indicating that individuals who are infected with COVID–19 and get hospitalized face a higher probability of mortality compared to those who are not hospitalized. Should we cease hospitalizing infected people? For both questions, the answer is a resounding “no,” as the proposed solutions fundamentally misconstrue the concept of “causality,” albeit for different reasons.

Throughout this course, you will develop a structured approach to causal reasoning and explore diverse research designs tailored for answering complex causal research questions. In the first part (Weeks 1–4), you will delve into the fundamentals of sound and ethical research as well as the intricacies of inferring causation, exploring what makes one factor causal and another not. In the second part (Weeks 5–8), you will take the first steps in systemizing your causal and theoretical thinking by employing Directed Acyclic Graphs (DAGs) as a modern and informal tool of causal mapping. Simple DAGs can illustrate why closing fire stations or opting not to hospitalize infected individuals might not be effective in preventing fires or reducing deaths caused by COVID–19. More broadly, DAGs can provide insight into which causal research questions can be addressed in principle and how. In the third and final part (Weeks 9–14), you will get familiar with various research designs (maps or blueprints for answering research questions), compare them along numerous dimensions (few cases vs many cases; experimental vs observational; qualitative vs quantitative), and unravel the distinctive strengths and weaknesses inherent in each of them.

¹ This syllabus is preliminary and subject to changes. Version 1: 02.02.2026.

Learning Outcomes

Upon completion of this course, the students will be able to:

- Elucidate the fundamentals of causality-oriented ethical empirical research,
- Describe and distinguish different understandings of causation,
- Theorize causal models and visualize them using DAGs,
- Evaluate the implications of different causal models for analysis and for overall research,
- Familiarize with a variety of research designs and the research questions one can (and cannot) answer with causal models,
- Develop a research design for a research question of their choice.

Prerequisites

This seminar is intended for both novice and experienced graduate students. A general understanding of concepts and theories of comparative politics, as well as knowledge of fundamental quantitative and qualitative research methods, is sufficient to partake in the seminar.

While perfection is neither expected nor required, students should possess the ability to comprehend and articulate themselves in English, as it will be the primary language used in class.

Course Structure

The course is structured around seven synchronous, in-person block seminars, with two sessions each. It adopts a dynamic and interactive seminar format that encourages active participation and fosters collaborative learning. In addition to individual research, the course emphasizes group discussions, critical analysis of course materials, and collective exploration of additional resources. To fully benefit from the course, students are expected to come prepared by completing the assigned readings ahead of each meeting. All course materials will be easily accessible through ILIAS, our online learning platform.

Assessment

This course follows a combined examination model (project work), which requires students to complete multiple assignments and submit them via ILIAS within specified deadlines. The format and specific criteria for each assignment will be communicated through ILIAS, ensuring transparency and clarity. Feedback is an essential component of the learning process, and therefore, the assignments will be returned to students with comments.

Failing to meet the requirements for a single assignment will not have negative consequences on its own. Instead, the final grade will be based on the cumulative points earned throughout the course, considering the following components:

Task	Deadline for Submission
Design a compelling and engaging research poster to succinctly convey your study’s rationale, theoretical assumptions, hypotheses, and your developed causal model. (40 points)	June 21, 2026
Drawing from the groundwork laid by previous assignments, craft a detailed exposé (3500 words, allowing a ±5% margin) that meticulously elucidates the intricacies of your research design (60 points)	August 23, 2026

Grading

At the end of the semester, points will be converted to final grades as follows:

Points	Grade
96 – 100	1,0
91 – 95	1,3
86 – 90	1,7
81 – 85	2,0
76 – 80	2,3
71– 75	2,7
66 – 70	3,0
61 – 65	3,3
56 – 60	3,7
51– 55	4,0
0 – 50	5,0

Registration

Registration is only possible independently by the students, for the course and the exam separately via KLIPS. The deadline for exam registration will be announced following the start of the semester. Late registrations, unfortunately, cannot be accommodated. Detailed instructions and support for exam registration can be found on the Institute’s website:

<https://politik.uni-koeln.de/en/studies/examinations/registration>.

Course Schedule

Week	Subject
Week 1 April 13, 10:00 – 11:30	<i>Fundamentals and Varieties of Research</i>
	<p>Halperin, S., & Heath, O. (2017). <i>Political Research: Methods and Practical Skills</i> (2nd ed.), Oxford, New York: Oxford University Press: Chapter 2.</p> <p>King, G., Keohane, R. O., & Verba, S. (1994). <i>Designing Social Inquiry: Scientific Inference in Qualitative Research</i>. Princeton: Princeton University Press: Chapter 1.</p> <p>Lehnert, M., Miller, B., & Wonka, A. (2007). Increasing the Relevance of Research Questions: Considerations on Theoretical and Social Relevance in Political Science. In T. Gschwend & F. Schimmelfennig (Eds.), <i>Research Design in Political Science: How to Practice What They Preach</i> (pp. 21–38). Palgrave Macmillan, London.</p>
Week 2 April 20, 10:00 – 11:30	<i>Research Goals and Research Questions</i>
	<p>Day, C., & Koivu, K. L. (2018). Finding the Question: A Puzzle–Based Approach to the Logic of Discovery. <i>Journal of Political Science Education</i>, 15(3), 377–386.</p> <p>Halperin, S., & Heath, O. (2017). <i>Political Research: Methods and Practical Skills</i> (2nd ed.), Oxford, New York: Oxford University Press: Chapter 5.</p> <p>Toshkov, D. (2016). <i>Research Design in Political Science. Theory in the Research Process</i>. Palgrave: Chapter 2.</p>
Week 3 April 27, 10:00 – 11:30	<i>How to Write a Research Paper</i>
	<p>Gündoğan, B., Koshy, K., Kurar, L., & Whitehurst, K. (2016). How to Make an Academic Poster. <i>Annals of Medicine and Surgery</i>, 11, 69–71.</p> <p>Writing For Research. (2016, September 25). <i>Structuring and Writing Academic Papers</i>. Medium. https://medium.com/@write4research/structuring-and-writing-academic-papers-5ccae16c33a4</p> <p>Wonka, A. (2007). Concept Specification in Political Science Research. In T. Gschwend & F. Schimmelfennig (Eds.), <i>Research Design in Political Science: How to Practice What They Preach</i> (pp. 41–61). Palgrave Macmillan, London.</p>
Week 4 May 4, 10:00 – 11:30	<i>Conducting Ethical Research (in Times of AI)</i>

Week	Subject
	<p>European Science Foundation, & All European Academies. (2011). <i>The European Code of Conduct for Research Integrity</i>.</p> <p>Nosek, B. A., Ebersole, C. R., DeHaven, A. C., & Mellor, D. T. (2018). The Preregistration Revolution. <i>Proceedings of the National Academy of Sciences</i>, 115(11), 2600–2606.</p> <p>Stockemer, D., Koehler, S., & Lentz, T. (2018). Data Access, Transparency, and Replication: New Insights From The Political Behaviour Literature. <i>PS: Political Science & Politics</i>, 51(4), 799–803.</p> <p>Tamaki, E. R., Jung, Y. J., Chatterley, J., Mitchell, G., Dzebo, S., Sandoval, C., Littvay, L., & Hawkins, K. A. (2025, October 10). <i>Populism Meets AI: Advancing Populism Research with LLMs</i>. ArXiv Preprint.</p> <p>Tamaki, E. R., & Littvay, L. (2024, August 27). <i>Chrono-Sampling: Generative AI Enabled Time Machine for Public Opinion Data Collection</i>. OSF Preprint.</p>
Week 5 May 11, 10:00 – 11:30	<i>This Thing Called “Causation”</i>
	<p>Rohlfing, I., & Zuber, C. I. (2021). Check Your Truth Conditions! Clarifying the Relationship Between Theories of Causation and Social Science Methods for Causal Inference. <i>Sociological Methods & Research</i>, 50(4), 1623–1659.</p> <p>Huntington-Klein, N. (2021). <i>The Effect: An Introduction to Research Design and Causality</i>. Boca Raton: Chapman and Hall/CRC: Chapter 5.</p>
Week 6 May 18, 10:00 – 11:30	<i>Causal Models and Basic Terms</i>
	<p>Huntington-Klein, N. (2021). <i>The Effect: An Introduction to Research Design and Causality</i>. Boca Raton: Chapman and Hall/CRC: Chapters 6 & 7.</p> <p>VanderWeele, T. (2015). <i>Explanation in Causal Inference: Methods for Mediation and Interaction</i>. Oxford: Oxford University Press: Chapter 1.</p>
Week 7 June 1, 10:00 – 11:30	<i>Keep That Backdoor Shut</i>
	<p>Huntington-Klein, N. (2021). <i>The Effect: An Introduction to Research Design and Causality</i>. Boca Raton: Chapman and Hall/CRC: Chapter 8.</p> <p>Mutz, D. C. (2016). Harry Potter and the Deathly Donald. <i>PS: Political Science & Politics</i>, 49(4), 722–729.</p>
Week 8 June 8, 10:00 – 11:30	<i>Walking through the Front Door & Mediation</i>

Week	Subject
<p>Huntington-Klein, N. (2021). <i>The Effect: An Introduction to Research Design and Causality</i>. Boca Raton: Chapman and Hall/CRC: Chapter 9.</p> <p>Röth, L. (2023). Pathway Analysis, Causal Mediation, and the Identification of Causal Mechanisms. In A. Damonte & F. Negri (Eds.), <i>Causality in Policy Studies: A Pluralist Toolbox</i> (pp. 123–151). Cham: Springer International Publishing.</p>	
Week 9 June 15, 10:00 – 11:30	<i>Basics of Quantitative Designs</i>
<p>Angrist, J. D., & Pischke, J. S. (2009). <i>Mostly Harmless Econometrics: An Empiricist's Companion</i>. Princeton: Princeton University Press: Chapter 2.</p> <p>Keele, L. (2015). The Statistics of Causal Inference: A View from Political Methodology. <i>Political Analysis</i>, 23(3), 313–335.</p>	
Week 10 June 22, 10:00 – 11:30	<i>Experiments (Online Session!)</i>
<p>Castanho Silva, B., & Proksch, S. O. (2020). Fake It ‘til You Make It: A Natural Experiment to Identify European Politicians’ Benefit from Twitter Bots. <i>American Political Science Review</i>, 115(1), 316–322.</p> <p>Dunning, T. (2008). <i>Natural Experiments in The Social Sciences: A Design-Based Approach</i>. Cambridge: Cambridge University Press: Chapter 2.</p> <p>Hainmüller, J., & Hopkins, D. (2015). The Hidden American Immigration Consensus: A Conjoint Analysis of Attitudes towards Immigrants. <i>American Journal of Political Science</i>, 59(3), 529–548.</p> <p>Hamrak, B., Jenne, E. K., Littvay, L., & Simonovits, G. (2025). The Public Opinion Effects of Antisemitic Elite Cues: A Survey Experiment on the Hungarian Soros Campaign. <i>East European Politics</i>, 1–20.</p>	
Week 11 June 29, 10:00 – 11:30	<i>Regression-Discontinuity Designs</i>
<p>Abou-Chadi, T., & Krause, W. (2020). The Causal Effect of Radical Right Success on Mainstream Parties’ Policy Positions: A Regression Discontinuity Approach. <i>British Journal of Political Science</i>, 50(3), 829–847.</p> <p>Dunning, T. (2008). <i>Natural Experiments in The Social Sciences: A Design-Based Approach</i>. Cambridge: Cambridge University Press: Chapter 3.</p> <p>Eggers, A. C., & Hainmüller, J. (2009). MPs for Sale? Returns to Office in Post-War British Politics. <i>American Political Science Review</i>, 103(4), 513–533.</p>	

Week	Subject
	Lang, V., & Schneider, S. A. (2024). Immigration and Nationalism in the Long Run. <i>CESifo Working Paper No. 10621</i> , Available at SSRN 4212484.
Week 12 July 6, 10:00 – 11:30	<i>Difference-in-Differences</i>
	<p>Bechtel, M. M., & Hainmüller, J. (2011). How Lasting is Voter Gratitude? An Analysis of the Short- and Long-Term Electoral Returns to Beneficial Policy. <i>American Journal of Political Science</i>, 55(4), 851–867.</p> <p>Gertler, P. J., Martinez, S., Premand, P., Rawlings, L. B., & Vermeersch, C. M. (2011). <i>Impact Evaluation in Practice</i>. World Bank Publications: Chapter 6.</p> <p>Huntington-Klein, N. (2021). <i>The Effect: An Introduction to Research Design and Causality</i>. Boca Raton: Chapman and Hall/CRC: Chapter 18.</p>
Week 13 July 13, 10:00 – 11:30	<i>Comparative Case Studies</i>
	<p>Lijphart, A. (1971). Comparative Politics and the Comparative Method. <i>American Political Science Review</i>, 65(3), 682–693.</p> <p>Rohlfing, I. (2012). <i>Case Studies and Causal Inference: An Integrative Framework</i>. Basingstoke: Palgrave Macmillan: Chapter 4.</p> <p>Skocpol, Theda (1979): <i>States and Social Revolutions: A Comparative Analysis of France, Russia, and China</i>. New York (NY): Cambridge University Press. Introduction.</p>
Week 14 July 20, 10:00 – 11:30	<i>Process Tracing & Wrap Up</i>
	<p>Bennett, A., & Checkel, J. T. (2014). Process Tracing: From Philosophical Roots to Best Practices. In A. Bennett & J. T. Checkel (Eds.), <i>Process Tracing: From Metaphor to Analytic Tool</i> (pp. 3–38). Cambridge: Cambridge University Press.</p> <p>Lieshout, R. H., Segers, M. L., & Vleuten, A. M. V. D. (2004). De Gaulle, Moravcsik, and the Choice for Europe: Soft Sources, Weak Evidence. <i>Journal of Cold War Studies</i>, 6(4), 89–139.</p> <p>Rohlfing, I. (2013). Comparative Hypothesis Testing Via Process Tracing. <i>Sociological Methods & Research</i>, 43(4), 606–642.</p> <p>Trampusch, C., & Palier, B. (2016). Between X and Y: How Process Tracing Contributes to Opening the Black Box of Causality. <i>New Political Economy</i>, 21(5), 437–454.</p>