

## 84-765 Advanced Research Methods – Fall 2019 Syllabus

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Course: Tuesday and Thursday 9:00–10:20am, Porter Hall A20

Office Hours: Wednesday 10:30am–12:30pm, Porter Hall 335A

### Course Description:

In this course, students will learn how to consume, evaluate, and begin the process of conducting original research in political science and other related social science fields. The course is broadly split into two parts. The first part introduces students to the foundational challenges of choosing research questions, making valid causal inferences, engaging with existing research, developing theories and hypotheses, defining and measuring concepts, and selecting cases and observations. The second part builds on this foundation and explores a number of the leading methods or tools of doing modern social science research including case studies, interviews, surveys, experiments of various kinds, regression analysis, and other approaches.

Throughout the course, the focus will be twofold. First, students will build their research toolkits, accumulating an understanding of both general principles of research design and causal inference as well as common research methods and their advantages and weaknesses. Second, students will apply these skills to the creation of an original thesis proposal, which will serve as the foundation for a thesis project in International Relations and Politics to be completed in the spring semester. In this sense, students will gain both a thorough conceptual *and* applied knowledge of key issues in the design of modern political science research.

### Note on Relationship with 84-265:

Students may notice some similarities between this course and the undergraduate research design course – Political Science Research Methods or 84-265. At one level, these courses do attempt to accomplish some of the same core goals – exposing students to the central ideas of social science and giving them practical experience using them on their own research. Yet this course goes well beyond what is offered in 84-265 in multiple ways.

First, as elaborated below, a large component of this course is the workshop format in which you write successive parts of your theses and we discuss and critique them every other week in class. Moreover, on weeks with no workshop, we will begin each class with an oral “check in” process to maintain accountability. Overall, these elements will probably take up about one fourth of our total course time and present a very distinct (and much more effective) dynamic compared to the undergraduate version of the class that exploits the power of small groups, regularized feedback, and public accountability in order to develop your work.

Second, the course has been revised to include a great deal of new content that fits your needs as graduate students rather than undergraduates seeing these ideas for the first time. This includes a

new textbook more appropriate for the Master's level, as well as two new statistical units that go beyond regression analysis (and redesigned problem sets). It also includes replacing old units on specific methods unlikely to be used in your theses (natural experiments, text as data) with more practical ones that will aid you in your thesis writing (research ethics, research habits). Finally, I have replaced as many of the other remaining readings as possible in order to expand the base of research to which students are exposed.

Third, students will find that – on top of the differences in format and content – the expectations for them will be quite a bit higher. Rather than seeing this course as an opportunity for their first sustained exposure to issues of social science research design, it should now be seen as more of a chance to delve into these issues deeply, and apply them in a way that yields genuine publishable work that contributes meaningfully to the academic conversation. In short, you may have already put a toe into the water; now we are going for a swim.

#### Note on Statistical Training:

This course is chiefly an attempt to provide you with a strong foundation in research design and prepare you to complete your theses in the spring. It includes a substantial statistical component as this is a key part of the modern social science research toolkit and will likely be part of many of your thesis projects. This component includes exposure to some of the central concepts of descriptive statistics, linear regression, count models, and time series methods, as well as practice using these with the software program Stata which provides a powerful but accessible platform for you to practice your skills. That said, it is not chiefly a statistics course but a foundation for you to build on and take in different directions depending on the needs of your specific project. Students can gain additional statistics training from a number of places, from mass open online courses (MOOCs) to statistically-oriented CMU library workshops to individual meetings with IPS (or other) faculty for more targeted help. A nice applied resource is the Stata companion to our textbook, *A Stata Companion to Political Analysis*, and there are many other Stata-oriented tutorials and resources online (some of which I may mention during the semester) that can give you a more applied look at different methods with enough intuition to make them useful to you. In sum, you have a variety of options if you want to gain more statistical training; don't hesitate to use them if needed.

#### Course Readings:

In an attempt to provide you with both a strong foundation and an array of different perspectives, we will use both a required textbook and a variety of articles, book chapters, and other resources. The required text is listed below (available online in hard copy or digital versions):

-*The Essentials of Political Analysis, 6<sup>th</sup> Ed*, by Philip Pollock, 2019 (henceforth EPA)

Additionally, the following texts are recommended but not required for purchase (we will utilize excerpts from them which I will provide to you, but you may want to consult them more broadly as you formulate your thesis):

-*Designing Social Inquiry*, by King, Keohane, and Verba, 1994 (henceforth KKV)

-*The Craft of Research, 4<sup>th</sup> Ed*, by Booth, Williams, and Colomb, 2016 (henceforth Craft)

-*The Fundamentals of Political Science Research, 3<sup>rd</sup> Ed*, by Kellstedt and Whitten, 2018 (henceforth FPSR)

You will also see readings marked “*Recommended*” in the syllabus. These are optional readings that will allow you to gain more exposure to a particular topic; they are not required but you are free to bring them up in class and ask me about any of them. Occasionally, I may bring them up myself with a brief explanation so that we can discuss them if they are especially relevant to the topic at hand.

Finally, students will also obtain a one-year student copy of the statistical software program *Stata* for use throughout the course (and the spring semester). This will be done with a link I provide to you and paid for by the Institute for Politics and Strategy.

#### Course Evaluation:

##### *Research Memos:*

This is both a course on research design as well as an intensive group-based **research workshop**. The main assignments are a series of 6 brief research memos, due roughly once every two weeks by 6PM on Sunday (deadlines below), in which you apply what we learn in class to developing a specific aspect of your thesis proposal. Each memo is worth 8% of your grade, for a total of 48% – you should approach them seriously. Moreover, we will discuss each one of them in class in an effort to offer constructive feedback and help you develop and improve your project. This means that everyone must read all of the memos before the Tuesday after their due date and come ready to discuss them. On the weeks with no memo, we will start class that Tuesday with a brief check-in on your progress to keep everyone on track and accountable.

##### *Thesis Proposals:*

The point of these memos is to work toward the development of your Master’s thesis proposal – this is your final paper in the course. The proposals are due about a week after the end of classes on Sunday, December 14<sup>th</sup> by 6PM and are worth 20% of the final grade. The proposals must be at least 20 double-spaced pages with 12 point font (use Times New Roman) and 1 inch margins. They must include a working title, advisor, abstract, description of your research question and its significance, review of the literature, theoretical arguments or hypotheses, research methodology and timeline for completion, and preliminary data analysis or detailed data collection protocol (if you are collecting original data). Essentially, the proposal should build on all of your memos and the feedback you receive on them this semester to produce a coherent whole. For further details, consult the IRP/AMP Thesis Guidelines handbook.

##### *Student Presentations:*

During the final week of the semester (12/2-6), students will present their proposals to the group. These presentations will last approximately 20 minutes (with 5 additional minutes for Q&A) and will comprise 8% of your final grades. These final presentations are meant to emulate the format of a conference panel and give you practice sharing your work and answering questions about it.

They should be supported by some type of visual aid (e.g., PPT, Prezi, Beamer), which you must submit to me on Canvas prior to your presentation.

*Problem Sets:*

The ability to interpret and analyze data is an increasingly vital part of the social sciences today. Accordingly, you will be assigned two problem sets in order to help you better understand some of the basic statistical methods used in our field. The first will focus on descriptive statistics and the second will focus on regression analysis. Like the final presentation, each problem set will be worth 6% of your grade. You may discuss these assignments with your peers, but you must write and submit your own work.

*Course Participation:*

Active and thoughtful participation is critical to your (and to our general) success this semester. All students should carefully read assigned readings (as well as circulated memos) prior to each course meeting and come ready to discuss and analyze them. The course will be very hands-on. Participation and attendance comprise 10% of your final grade.

*Extra Credit:*

Students will also have the opportunity to receive extra credit for attending – and learning from – relevant talks or workshops during the semester. Students can receive credit for attending up to 5 such events, with each one adding an additional half point to their overall research memos grade. To receive credit, students must attend the talk and email a one-paragraph summary of what they learned to me that day. I will frequently ask those who attend to share what they learned in class. Eligible events include research talks by faculty in IPS or other social science fields at CMU (i.e. Psych., SDS, Heinz/Public Policy, etc.), as well as CMU library workshops (only those related to the social sciences, not those specific to STEM or humanities). The list of library workshops this fall is available at: <http://www.library.cmu.edu/workshops>. If you have a question about whether an event is eligible for extra credit, contact me before attending for an answer.

Research memos	48% (8% each)
Problem sets	16% (8% each)
Final presentation	6%
Final proposal	20%
Attendance/Participation	10%
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Total	100%

Proper documentation of a medical or personal emergency is needed for late work to be excused, otherwise it will be penalized at a rate of 10% per day. Barring exceptional conditions, late work that is excused must be submitted within one week of the original deadline. Any grievances with a grade must be submitted in writing to the instructor within one week of the grading as well, and will lead if appropriate to a re-grading of your assignment. Do note that your grade may be raised or lowered in this process. Final grades will be based on the following grade scale, with rounding at instructor discretion:

Grading Scale:

	B+	87 to 89.9	C+	77 to 79.9	D+	67 to 69.9					
A		93 to 100	B		83 to 86.9	C		73 to 76.9	D		60 to 66.9
A-		90 to 92.9	B-		80 to 82.9	C-		70 to 72.9	E/F		0 to 60

Inappropriate Technology Use:

Cellphones should be silenced and stowed during class. Laptops may be used for class purposes. Inappropriate or disruptive technology use may affect your participation grade.

Academic Integrity/Misconduct:

All work you do in this course is expected to be your own. Absolutely no cheating or plagiarism (use of someone else's words or ideas without properly citing them) will be tolerated. Any cases of cheating or plagiarism will be reported to the university according to the University Policy on Academic Integrity. For questions about this policy, see <http://www.cmu.edu/policies/student-and-student-life/academic-integrity.html>

Accommodations for Disabilities:

If you have a disability and have an accommodations letter from the Disability Resources office, please discuss your accommodations or needs with me as early in the semester as possible. I will work with you to ensure appropriate accommodations are provided. If you suspect you may have a disability and would benefit from accommodations but are not yet registered with the Office of Disability Resources, I encourage you to contact them at [access@andrew.cmu.edu](mailto:access@andrew.cmu.edu).

Maintaining Personal Wellness:

**Take care of yourself.** Do your best to maintain a healthy lifestyle this semester by eating well, exercising, avoiding drugs and alcohol, getting enough sleep, and taking time to relax. This will help you achieve your goals and cope with stress. All of us benefit from support during times of struggle. You are not alone. There are many helpful resources on campus and an important part of the college experience is learning how to ask for help. Asking for support sooner rather than later is often helpful. If you or anyone you know experiences any academic stress, difficult life events, or feelings of anxiety or depression, we strongly encourage you to seek support. Counseling and Psychological Services (CaPS) is here to help. Call 412-268-2922 and visit their website at <http://www.cmu.edu/counseling/>. Consider reaching out to a friend, faculty, or a family member you trust for help in getting connected to support services.

**Part 1 – Foundations of Social Science Research**

**Tuesday 8/27 & Thursday 8/29.** Developing research questions.

- *Designing Social Inquiry*, Ch. 1
- Chenoweth, Erica, and Jason Lyall. 2012. "What NSF-Funded Projects Have Taught Us About National Security Issues." *The Monkey Cage*.

*Recommended:*

- Musgrave, Paul. 2017. “The Starbucks Curse: A Research Design Thought Experiment.”

**Tuesday 9/3 & Thursday 9/5. Drawing (valid) causal inferences.**

- EPA Ch. 3 (Chs. 4-5 recommended)
- FPSR Ch. 3
- Intro to Stata (basics)

**Memo #1: Choosing a Research Question – due on Sunday, 9/8**

Choose some puzzling variation or phenomenon that you think is (1) important and (2) poorly understood by existing research. Identify at least one working hypothesis that you think might shed more light on what is driving it. Based on this, write a two-page memo that outlines your chosen research question, being sure to explain both its theoretical and real-world significance (the “so-what?”) in addition to your hypothesis about what explains it. Remember to make the question a “why?” (not a “what?”) question and to phrase it in general terms (no proper nouns). Circulate to everyone by 6pm on Sunday.

**Tuesday 9/10 & Thursday 9/12. Engaging with existing literature.**

- *Craft of Research*, Ch. 16 (Introductions and Conclusions)
- Knopf, Jeffrey W. 2006. “Doing a Literature Review.” *PS, Political Science & Politics* 39(1): 127-32.

**Tuesday 9/17 & Thursday 9/19. Building theoretical arguments.**

- *Craft of Research*, Ch. 7 (Making Good Arguments)
- O’Brien, Kevin J. 2004. “Discovery, Research (Re)Design, and Theory Building.” Prepared for *Doing Fieldwork in China*, eds. Marie Edin and Stig Thøgersen, 121-47. Honolulu: University of Hawaii Press, 2006.

*Recommended:*

- Geddes, Barbara. 2003. *Paradigms and Sand Castles: Theory Building and Research Design in Comparative Politics*. Ann Arbor: University of Michigan Press, Chs. 1-2.

**Note: guest speaker from CMU libraries on 9/17.**

**Memo #2: Reviewing the Existing Literature – due on Sunday, 9/22**

Identify at least eight studies (at least six of which must be scholarly journal articles or books) about your research question, summarize them, and synthesize them into natural perspectives, camps, or schools of thought. In other words, outline what we know about your specific topic. Then, identify at least one flaw or “gap” in this literature – what we do not know – that might be amenable to further study. Based on this, write a two-page memo reviewing and evaluating the literature on your question. Circulate by 6pm on Sunday.

**Tuesday 9/24, Thursday 9/26. Defining and measuring concepts.**

- EPA Chs. 1-2

- RECOMMENDED: Peruse the codebooks for some of the leading databases in the field. How do they define and measure concepts like democracy, war, and terrorism? Do these measures seem valid and reliable? How can we evaluate and improve them?
  - Polity: <http://www.systemicpeace.org/inscr/p4manualv2017.pdf>
  - COW: <http://www.correlatesofwar.org/data-sets/COW-war/the-cow-typology-of-war-defining-and-categorizing-wars/view>
  - GTD: <https://www.start.umd.edu/gtd/downloads/Codebook.pdf>
- Stata module #2 (description)

*Recommended:*

- Kertzer, Joshua, and Kathleen McGraw. 2012. "Folk Realism: Testing the Microfoundations of Realism in Ordinary Citizens." *International Studies Quarterly* 56(2): 245-58.

### **Tuesday 10/1 & Thursday 10/3. Selecting cases and observations.**

- Geddes, Barbara. 1990. "How the Cases You Choose Affect the Answers You Get: Selection Bias in Comparative Politics." In *Political Analysis*, vol. 2, ed. James A. Stimson, 131-50. Ann Arbor: University of Michigan Press.
- Gerring, John, and Lee Cojocar. 2015. "Case-Selection: A Diversity of Methods and Criteria." *Working Paper*.

*Recommended:*

- Skocpol, Theda. 1976. "France, Russia, China: A Structural Analysis of Social Revolutions." *Comparative Studies in Society and History* 18(2); 175-210.

***Note: guest speaker from GCC on 10/1***

### **Problem Set #1: Descriptive Statistics – due on Sunday, 10/6 by 6pm**

#### **Part 2 – Common Research Methods and Strategies**

### **Tuesday 10/8 & Thursday 10/10. Case studies.**

- Mahoney, James. 2000. "Strategies of Causal Inference in Small-N Analysis." *Sociological Methods & Research* 28(4): 387-424.
- Slater, Dan, and Daniel Ziblatt. 2013. "The Enduring Indispensability of the Controlled Comparison." *Comparative Political Studies* 46(10): 1301-27.
- Lee, Terence. 2009. "The Armed Forces and Transitions from Authoritarian Rule." *Comparative Political Studies* 42(5): 640-69.

*Recommended:*

- Fravel, Taylor. 2010. "The Limits of Diversion: Rethinking Internal and External Conflict." *Security Studies* 19: 307-41.

### **Memo #3: Selecting Cases for Analysis – due on Sunday, 10/13**

Identify the case(s) that you will use to examine your research question and investigate your key hypothesis. Why are these cases useful or appropriate to study? Write a two-page memo outlining your rationale for picking these cases (e.g., representative, diverse, most/least likely) and how they fit into the broader population of interest. Be sure to discuss how you will avoid key issues such as selection bias as appropriate. Finally, describe the data that you anticipate collecting or using from them. Circulate by 6pm on Sunday.

**Tuesday 10/15 & Thursday 10/17. Interviews.**

- Leech, Beth, et al. 2002. "Symposium: Interview Methods in Political Science." *PS, Political Science & Politics* 35(4): 663-88.
- Jamal, Amaney. 2012. *Of Empires and Citizens: Pro-American Democracy or No Democracy At All?* Princeton, NJ: Princeton University Press, ONLY Chs. 1 and 4.

*Recommended:*

- Parkinson, Sarah Elizabeth. 2013. "Organizing Rebellion: Rethinking High-Risk Mobilization and Social Networks in War." *American Political Science Review* 107(3): 418-32.

**Tuesday 10/22 & Thursday 10/24. Surveys.**

- Krosnick, Jon A. and Stanley Presser. 2010. "Question and Questionnaire Design." In *Handbook of Survey Research*, eds. Peter V. Marsden and James D. Wright. Bingley, UK: Emerald.
- Blaydes, Lisa, and Drew Linzer. 2012. "Elite Competition, Religiosity, and Anti-Americanism in the Islamic World." *American Political Science Review* 106(2): 1-19.
- Oliver, Eric J., and Thomas Wood. 2014. "Conspiracy Theories and the Paranoid Style(s) of Mass Opinion." *American Journal of Political Science* 58(4): 952-66.

*Recommended:*

- Keeter, Scott. 2005. "Survey Research." In *Doing Research: Methods of Inquiry for Conflict Analysis*, ed. Daniel Druckman. Thousand Oaks, CA: Sage Publications, Inc.

**Memo #4: Qualitative Research Strategy – due on Sunday, 10/27**

Choose one of the case(s) identified in your last memo and sketch out a three-page qualitative research strategy using either case studies, interviews, or focus groups to explore your theory. If you choose a case study approach, explain the type you will use (e.g., between-case, within-case, both), and how it will help test your theory. If you choose an interview or a focus group approach, explain the types of people and questions you will rely on (e.g., closed, open, etc.), and how they will help test your theory. Circulate by 6pm on Sunday.

**Tuesday 10/29 & Thursday 10/31. Linear regression.**

- EPA Ch. 8 (Chs. 6-7 recommended)
- A Stata Companion to Political Analysis, Ch. 8
- Stata Module #3 (regression)

*Recommended:*

- Brambor, Thomas, William R. Clark, and Matt Golder. 2006. "Understanding Interaction Models: Improving Empirical Analyses." *Political Analysis* 14(1):63-82.

**Tuesday 11/5 & Thursday 11/7. Beyond linear regression (LCDVs and time series).**

- EPA Ch. 9
- FPSR Ch. 11
- Stata Module #4 (logit and time series)

*Recommended:*

- Stephan, Maria J., and Erica Chenoweth. 2008. "Why Civil Resistance Works: The Strategic Logic of Nonviolent Conflict." *International Security* 33(1): 7-44.

- Jaeger, David A., and M. Daniele Paserman. 2009. "The Shape of Things to Come? On the Dynamics of Suicide Attacks and Targeted Killings." *Quarterly Journal of Political Science* 4(4): 315-42.

Due by Friday 11/8:

Send the name of your thesis advisor to me and Emily Half by email (must be in IPS).

**Memo #5: Quantitative Research Strategy – due on Sunday, 11/10**

Write a three-page memo outlining a "large-n" or quantitative research strategy using surveys, experiments, or some other observational data to explore your theory. Make sure to clarify (1) the parts of your theory that can be tested quantitatively, (2) how you will collect or access the data needed to test them, and (3) how you will analyze that data statistically to accept or reject your hypotheses. Circulate by 6pm on Sunday.

**Tuesday 11/12 & Thursday 11/14. Experiments, from lab to field.**

- Silverman, Daniel, Daniel Kent, and Christopher Gelpi. "Partisan Rhetoric, Public Fears of Terrorism, and the Foundations of American Interventionism." *Working Paper*.
- Fearon, James, Macartan Humphreys, and Jeremy Weinstein. 2009. "Can Development Aid Contribute to Social Cohesion after Civil War? Evidence from a Field Experiment in Post-Conflict Liberia." *American Economic Review* 99(2): 287-91.
- Grossman, Guy. 2011. "Lab-in-the-field Experiments." *Newsletter of the APSA Experimental Section*, 13-19.

*Recommended:*

- Loewen, Peter John, Daniel Rubenson, and Leonard Wantchekon. 2010. "Help Me Help You: Conducting Field Experiments with Political Elites." *ANNALS of the American Academy of Political and Social Science* 628(1): 165-75.
- Dunning, Thad. 2012. *Natural Experiments in the Social Sciences: A Design-Based Approach*. Cambridge, UK: Cambridge University Press: Ch. 1.

**Memo #6: Ethical Review – due on Sunday, 11/18**

Pair up with another student in the class. Reread the past five assignments of your partner and outline three ethical concerns in their proposals – as well as at least one idea of how these can be mitigated – in a two-page memo. Circulate by 6pm on Sunday.

**Tuesday 11/19 & Thursday 11/21. Research ethics.**

- Fujii, Lee Ann. 2012. "Research Ethics 101: Dilemmas and Responsibilities." *PS: Political Science and Politics* 45(4): 717-23.
- Humphreys, Macartan. 2013. "Monkey Business." *Newsletter of the APSA Comparative Politics Section*, 17-19.
- Anderson, Richard G. 2013. "Registration and Replication: A Comment." *Political Analysis* 21(1): 38-39.

*Recommended:*

- Singal, Jesse. 2015. “The Case of the Amazing Gay-Marriage Data: How a Graduate Student Reluctantly Uncovered a Huge Scientific Fraud.” *The Cut*.

*Note: guest speaker from CMU IRB on 11/21*

**Problem Set #2: Regression Analysis – due on Sunday, 11/24 by 6pm**

**Tuesday 11/26. Research habits.**

- Peterson, Todd C., Sofie R. Kleppner, and Crystal M. Botham. 2018. “Ten Simple Rules for Scientists: Improving Your Writing Productivity.” *PloS Computational Biology* 14(10): 31006379.
- Stata Module #5 (data merging)

*Recommended:*

- Clear, James. “The Daily Routines of 12 Famous Writers.” <https://jamesclear.com/daily-routines-writers>
- Theidon, Kimberly. 2014. “‘How Was Your Trip?’ Self-Care for Researchers Working and Writing on Violence.” *Drugs, Security, and Democracy Working Papers on Research Security No. 2, Social Science Research Council*. [http://webarchive.ssrc.org/working-papers/DSD\\_ResearchSecurity\\_02\\_Theidon.pdf](http://webarchive.ssrc.org/working-papers/DSD_ResearchSecurity_02_Theidon.pdf)

*Note: no classes on Thursday 11/28 (Thanksgiving break).*

**Tuesday 12/3 & Thursday 12/5. Final presentations.**

- No readings, presentation week!

**\*\*\*Final thesis proposals due by Sunday, December 14<sup>th</sup> at 6pm\*\*\***