PLAD 2222: Introduction to Research Methods for Political Science
University of Virginia
Spring 2019
MW 3:30-4:45 pm, New Cabell 058

Instructor: Carrie Coberly
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Office Hours:
Tuesdays 3-5 pm and most Thursdays 3-5 pm, Gibson 063
You can come to office hours without an appointment, but to reserve a time, sign up at
https://calendly.com/carriecoberly/office-hours

This course will familiarize you with the basic principles of conducting political science research. We will review the scientific method as it applies to politics, introduce a variety of approaches to the study of political science, and practice core research skills. Course goals for students include:

- Become a better consumer of research presented in politics classes and the media.
- Gain familiarity with the use of statistics in political science and the software used for analysis.
- Develop writing and analytical skills for research on politics.

Students should leave this course with a better understanding of the analytical and ethical implications of using different methodologies to study questions in political science.

Evaluation

This course emphasizes the development of practical research skills. Attendance and active participation in daily class activities is required. Assigned readings provide essential background information and examples of core concepts, and classes are spent in exercises that apply those concepts to common research tasks and challenges. Weekly homework assignments and larger group projects will walk you through the steps of research design and analysis. Except as noted, all assignments should be turned in through the Collab "Assignments" tab.

Homework Assignments (50% of grade, 3-5% each)
    Assignments will reinforce the lessons learned in class. While they vary in difficulty, they are designed to be completed in one-two hours and are due each week.

Group Projects (30% of grade, 5-15% each)
    Three group projects will require you to 1) write a literature review (10% of grade) and 2) either replicate an existing research paper using statistical analysis or design your own research project (this project is divided into an outline worth 5% of the grade and final paper

worth 15%). I will assign groups of two or three people to work together, and a portion of each grade will be based on peer evaluation of participation in group activities. Students preparing to join an Honors or Distinguished Major Program or applying for an undergraduate research award may do an individual project if desired.

Midterm and Final Exams (20% of grade, 10% each)
A midterm will test knowledge of key concepts and the ability to apply them. It will be closed-book and consist of short answer questions and practical exercises. The final exam will be open book and consist of practical exercises that apply the concepts you have learned.

Extra Credit (up to 3% of grade)
Students wishing to receive extra credit can complete the analysis of the research design or do an oral presentation of the replication you wrote for Group Project 3.

Grading scale

A+ = 98-100	B+ = 87-89
A = 94-97	B = 83-86
A- = 90-93	B- = 80-82

Borderline grades (for example, an 89.5) will be adjusted up or down at the instructor's discretion based on class participation. Avoid getting lower than a B- in class.

Key Dates

January 29	Last day to drop class
February 27	GP1: Literature Review due
March 6	Midterm
March 18	Last day to withdraw from class
March 25	GP2: Research Design outline due
April 29	GP3: Research Design due/Last day of class
May 4	Final Exam
May 10	Extra Credit due

Other assignments are due on a weekly basis. For additional information, see the schedule below and the Collab "Assignments" and "Activities" tabs.

Course Policies

Late assignments
Due to the cumulative nature of the work in this course, **I cannot accept late assignments.** If you anticipate a problem meeting a deadline, please discuss it with me in advance.

Challenging a grade
If you disagree with a grade you received on an assignment, you may appeal that grade. To appeal, please submit a 1-2 paragraph explanation why the grade given was inappropriate. I

will review the explanation and reevaluate the grade. Re-grade requests must be submitted no earlier than one day after grades have been returned and no later than one week from the time the grade was first received.

<u>Technology Policy</u>
We will use laptops for most daily class activities. Please bring your laptop to class, but use it only for class activities. Mobile phones should be on silent and stowed away during class.

<u>Contact Policy</u>
I am always reachable via email and during my office hours, but will not always respond immediately. I will not respond to questions about assignments after 9 pm the day before it is due. I will not respond to questions about grades until 24 hours after they have been returned to you.

<u>Academic Honor Code</u>
All students are expected to submit work that is a reflection of their own ideas and to properly cite published sources when referencing the ideas of others. Plagiarism will result in a failing grade for the course. If you have any questions about proper citation practices or what constitutes plagiarism, please come talk to me. Please pledge all assignments.

Schedule of Readings and Assignments

You must do the readings for discussion on the day listed.

Readings are available on the Collab site under the "Activities" tab and can also be found under "Resources." In addition, you are required to purchase one book for this course:

> Wheelan, Charles. 2013. *Naked Statistics.* W. W. Norton.

We will read around 75% of the book, starting in early February. It is available online for around $10 and is also on reserve at Clemons Library.

Unit 1: How to read political science research

This unit focuses on the basic concepts of research design in political science. You should end the unit with a better understanding of why the scientific method is relevant to the study of politics, a vocabulary with which to talk about research, and the skills to identify and evaluate political science research articles.

<u>Monday, January 14 – What is political science?</u>
How can the scientific method be applied to politics?
Empirical vs. normative questions

Readings: Koerth-Baker, Maggie. 2017. "The Tangled Story Behind Trump's False Claims of Voter Fraud." May 11. https://fivethirtyeight.com/features/trump-noncitizen-voters/ (April 4, 2018).

Meyer, Robinson. 2018. "The Grim Conclusions of the Largest-Ever Study of Fake News." *The Atlantic*, March 8. https://www.theatlantic.com/technology/archive/2018/03/largest-study-ever-fake-news-mit-twitter/555104/ (November 28, 2018).

Wednesday, January 16 – Variables
How can we measure political concepts?
What are the implications of the measurement we choose?

HW1 due: Write a paragraph on your interest in political science, including an empirical question you are interested in studying.

Reading: Babbie, Earl R. 2007. *The Practice of Social Research.* Wadsworth Publishing, 120-151. (Chapter 5: "Conceptualization, Operationalization and Measurement," 32 pages)

Wednesday, January 23 – Theory and Hypotheses
Theory vs. hypothesis
Probabilistic vs. deterministic outcomes

HW2 due: Write two paragraphs describing one concept and two ways to measure it.

Reading: Kellstedt, Paul M. and Guy D. Whitten. 2018. *The Fundamentals of Political Science Research.* Cambridge University Press, 25-41. (Chapter 2: "The Art of Theory Building," 16 pages)

Monday, January 28 – Internal Validity
What is a cause?
Correlation vs. causation and confounding variables

HW 3 due: Write a testable hypothesis

Readings: *Skim the following paper for content, focusing on identifying answers to the following questions: What is the Achen and Bartels' theory? What is their hypothesis? What are potential alternate explanations for their results?*

Achen, Christopher and Larry Bartels. 2012. "Blind Retrospection: Why Shark Attacks are Bad for Democracy." Vanderbilt University Center for the Study of Democratic Institutions Working Paper 5-2013. https://www.vanderbilt.edu/csdi/research/CSDI_WP_05-2013.pdf

Optional: Gelman, Andrew. 2016. "Do shark attacks swing elections?" *The Washington Post* October 28. https://www.washingtonpost.com/news/monkey-cage/wp/2016/10/28/do-shark-attacks-swing-elections/ (May 27, 2018).

Wednesday, January 30 – External Validity
Levels of analysis
Case selection and selection bias

Readings: Seawright, Jason and John Gerring. 2008. "Case Selection Techniques in Case Study Research: A Menu of Qualitative and Quantitative Options." *Political Research Quarterly* 61 (2): 294-308. (14 pages)

Geddes, Barbara. 1990. "How the Cases You Choose Affect the Answers You Get: Selection Bias in Comparative Politics." *Political Analysis* 2: 131-145. (14 pages)

Monday, February 4 – Types of Research
Observational vs. Experimental Research
Qualitative vs. Quantitative

Readings: Kellstedt and Whitten, 67-84. (Chapter 4: "Research Design," 17 pages)

Druckman, James N., Donald P. Green, James H. Kuklinski, and Arthur Lupia. 2006. "The Growth and Development of Experimental Research in Political Science." *American Political Science Review* 100 (4): 627-635. (8 pages)

Wednesday, February 6 – How to write a literature review
Finding articles and data
Outlining and Citations
Library resources

HW4 due: Read one of three articles (provided), identifying the theory, hypothesis, method, key variables, and possible sources of bias.

Recommended reading: Creswell, John W. and J. David Creswell. 2018. "Review of the Literature." *Research Design: Qualitative, Quantitative, and Multi-Method Approaches*, p. 23-44. (Chapter 2, 21 pages)

Unit 2: Introduction to Statistical Analysis

This unit focuses on one way to assess observational studies: statistical analysis. You should end this section with a basic understanding of statistical terminology and regression as well as a knowledge of how to use one statistical program (R). You will not become experts in either statistics or R, but will know where you can go to get help and learn more on these topics.

Monday, February 11 – Data
Understanding and manipulating data
Introduction to R

Reading: Wheelan, 110-126. (Chapter 7: "The Importance of Data," 16 pages total)

Wednesday, February 13 – Intro to Statistics
Why use statistics?
Descriptive statistics
Correlation, cross-tabulation, and difference of means

HW5 due: Write code in R to import and clean data using 1 of 3 excel datasets (provided)

Reading: Wheelan, 15-65. (Chapter 2-4: "Descriptive Statistics", "Deceptive Description," "Correlation," 52 pages)

Monday, February 18 – Sampling
Probability and Non-Probability Sampling

Reading: Wheelan, 68-109. (Chapter 5-6: "Basic Probability," "Problems with Probability," 40 pages)

Wednesday, February 20 – Writing Workshop
Share and comment on draft literature reviews

Monday, February 25 – Regression 101
OLS coefficients and what they mean
How to read a regression table

Readings: Wheelan, 143-168 and 185-224. (Chapters 9, 11, 12: "Inference," "Regression Analysis," "Common Regression Mistakes," 64 pages)

Fowler, Anthony and Andrew Hall. 2017. "Do Shark Attacks Influence Presidential Elections? Reassessing a Prominent Finding on Voter Competence." Working Paper. http://www.andrewbenjaminhall.com/FowlerHall_Sharks.pdf

Wednesday, February 27 – Statistical Analysis and Graphics in R
How to run an OLS regression and create a graph in R
Principles for visual representation of data

GP1 due: Literature Review

Monday, March 4 – Review

HW6 due: Write code in R for a multivariate regression. Interpret the results and provide a graph of the best fit line.

Wednesday, March 6 – Midterm

Unit 3: Designing Political Research

This unit introduces a variety of ways to conduct political research, including experimental, qualitative, and quantitative methods. Our focus is on selecting the right type of research method for your question. The unit is organized thematically, giving priority to methods most likely to be used by undergraduates. You should end this section with the ability to design a research project that addresses a causal question.

Part 1: Gathering data from people

Monday, March 18 – Interviews
How can we structure interviews to make best use of them in political science?
Open-ended question design

Readings: Mosley, Layna. 2013. "'Just Talk to People?' Interviews in Contemporary Political Science." In Layna Mosley, ed. *Interview Research in Political Science*. Cornell University Press, 1-28. (28 pages)

Gray, Eliza. 2018. "The Next Generation of Republicans." *The Washington Post*, July 16. https://www.washingtonpost.com/news/style/wp/2018/07/16/feature/the-next-generation-of-republicans-do-they-stand-with-trump/?utm_term=.4fd01c3527e0

Wednesday, March 20 – Surveys
Populations and samples
Survey question design

HW7 due: Conduct an interview

Readings: Wheelan, 169-184. (Chapter 10: "Polling," 14 pages)

Berinsky, Adam J. 2017. "Measuring Public Opinion with Surveys." *Annual Review of Political Science* 20: 309-329.

Monday, March 25 – Survey Experiments
Random samples vs. randomization
How to create and distribute surveys using Qualtrics

HW8 due: Describe the population, sampling frame, and sample used in one of two articles (provided).

Reading: Barabas, Jason and Jennifer Jerit. 2010. "Are Survey Experiments Externally Valid?" *American Political Science Review* 104 (2): 226-242. (16 pages)

Wednesday, March 27 - Writing Workshop
Share and comment on draft research designs/replications

GP 2 due: Outline of research design

Part 2: Gathering data from documents

Monday, April 1 – Process Tracing
Necessary and sufficient causes
Using counterfactuals for causal analysis

HW9 due: Write a survey experiment in Qualtrics.

Readings: Mahoney, James, Erin Kimball, and Kendra L. Koivu. 2009. "The Logic of Historical Explanation in the Social Sciences." *Comparative Political Studies* 41 (1): 114-126. (13 pages)

Wednesday, April 3 – Text Analysis
How can automated content analysis help study documents? When is it appropriate?

Reading: Wilkerson, John and Andreu Casas. 2017. "Large-Scale Computerized Text Analysis in Political Science: Opportunities and Challenges." *Annual Review of Political Science* 20 (1): 529-535 (6 pages)

Part 3: Evaluating cases

Monday, April 8 – Participant observation
Observing environments and outcomes qualitatively
How do we introduce bias and change outcomes by our presence in an interview or activity?

HW10 due: Write a set of key words to conduct text analysis of a document

Reading: Creswell and Creswell 2018, p. 179-209. (Chapter 9: Qualitative Methods, 30 pages)

Wednesday, April 10 – Program evaluation
Designing programs to allow quantitative analysis of policy implementation

Reading: Wheelan, 225-240. (Chapter 13: "Program Evaluation," 15 pages)

Monday, April 15 – Writing Workshop
Share and comment on draft research designs/replications

Wednesday, April 17 – Case Studies
What goes in a case study?
Controlled comparison

HW11 due: Conduct a participant observation

Reading: Gerring, John. 2004. "What Is a Case Study and What Is It Good For?" *American Political Science Review* 98 (2): 341-354. (13 pages)

Part 4: Putting it all together

Monday, April 22 – Choosing the right method
How do methods relate to hypotheses?
How does your choice of method impact your results?

HW12 due: Participate in a lab experiment (or alternate assignment)

Wednesday, April 24 - Ethics
Procedures and principles for promoting transparent and ethical research
UVA's Institutional Review Board

HW13 due: Complete one segment of IRB training

Readings: Nosek, B.A. et al. 2015. "Promoting an open research culture." *Science* 348 (6242): 1422-1425. (3 pages)

Lynch, Marc. 2018. "What the UAE's arrest of Matthew Hedges means for political science research in the Middle East." *The Washington Post*, November 29. https://www.washingtonpost.com/news/monkey-cage/wp/2018/11/29/what-the-uaes-arrest-of-matthew-hedges-means-for-political-science-research-in-the-middle-east/?utm_term=.944d7ce8d811 (January 2, 2019).

SKIM ONLY: American Political Science Association. 2012. *A Guide to Professional Ethics in Political Science.*
http://www.apsanet.org/portals/54/Files/Publications/APSAEthicsGuide2012.pdf

Monday, April 29 – Conclusion

GP2 due: Research Design

Re-read: Koerth-Baker 2017. https://fivethirtyeight.com/features/trump-noncitizen-voters/

Meyer 2018. https://www.theatlantic.com/technology/archive/2018/03/largest-study-ever-fake-news-mit-twitter/555104/

Saturday, May 4 – Final Exam

Friday, May 10 – Extra Credit due

Additional Resources

None of the below books or readings is required reading, but may be useful in understanding concepts and developing ideas. I have placed the introductory textbooks on reserve at Clemons Library for you to use as reference material.

Online Resources

https://data.library.virginia.edu/: UVA data-related resources

ICPSR (https://www.icpsr.umich.edu/icpsrweb/instructors/support/students): The University of Michigan's Inter-university Consortium for Political and Social Research has a wide range of resources for students and offers summer courses on advanced topics in quantitative research. The qualitative counterpart is IQMR, the Institute for Qualitative and Multi-method Research (https://www.maxwell.syr.edu/moynihan/cqrm/Institute_for_Qualitative_and_Multi-Method_Research/), but they do not currently have resources set up for undergraduates.

fivethirtyeight.com: Nate Silver's website, with statistical analysis of sports and politics.

Monkey Cage – The Washington Post (https://www.washingtonpost.com/news/monkey-cage/): A forum where academics write about their research in a policy-accessible way.

Introductory Textbooks and Readings

Allison, Paul D. 1999. *Multiple Regression: A Primer.* Thousand Oaks, CA: Pine Forge Press.
        Explains in clear language the technical details of how regression works, providing multiple examples and visual aids.

Babbie, Earl. 2007. *The Practice of Social Research.* Belmont, CA: Thomson Wadsworth.

Converse, Jean M. and Stanley Presser. 1986. *Survey Questions: Handcrafting the Standardized Questionnaire.* Sage Publications. [available as e-book]

Creswell, John W. and J. David Creswell. 2018. *Research Design: Qualitative, Quantitative and Mixed Method Approaches.* Sage Press. [at Darden Reserves]

Galvan, Jose L. and Melisa C. Galvan. 2017. *Writing Literature Reviews: A Guide for Students of the Social and Behavioral Sciences.* Routledge. [available as e-book]

Kellstadt, Paul and Guy Whitten. 2018. *The Fundamentals of Political Science Research.* Cambridge University Press.

Parsons, Craig. 2007. *How to Map Arguments in Political Science.* Oxford University Press.
　　　　The language is geared toward faculty and grad students, but if you've ever wondered what your teachers were talking about when they talk about structural, institutional, psychological, and ideational arguments, this can help you understand. [Available as e-book]

Pollock, Phillip. 2015. *The Essentials of Political Analysis.* CQ Press. [One chapter in Collab, otherwise available to purchase only]

Shadish, William, Thomas Cook, and Donald Campbell. 2002. *Experimental and Quasi-Experimental Designs for Generalized Causal Inference*. Boston: Houghton Mifflin.

Teetor, Paul. 2011. *R Cookbook: Proven Recipes for Data Analysis, Statistics, and Graphics.* O'Reilly Media. http://www.cookbook-r.com

Weisberg, Herbert F. 2005. *The Total Survey Error Approach: A Guide to the New Science of Survey Research.* University of Chicago Press.

Advanced Textbooks and Readings

Bates, Robert H. et al. 1998. *Analytic Narratives*. Princeton University Press.
　　　　Discusses the use of historical narrative for causal inference.

Coppedge, Michael. 2012. *Democratization and Research Methods*. Cambridge University Press.
　　　　For those interested in theories of democratization, a concise review of the relevant issues across all methodological approaches. Provides a good understanding of how an issue can be researched with many different tools and the implications of the choice of approach.

Khandker, Shahidur R., Gayatri B. Koolwal, and Hussain A. Samad. 2010. *Handbook on Impact Evaluation: Quantitative Methods and Practices.* The World Bank.
　　　　Introduces advanced causal inference techniques, including matching, regression discontinuity, and instrumental variables, with application to international development programs.

King, Gary, Robert O. Keohane, and Sidney Verba. 1994. *Designing Social Inquiry.* Princeton University Press.
　　　　The graduate-level text on research design of the 2000s.

Morgan, Stephen L. and Christopher Winship. 2015. *Counterfactuals and Causal Inference: Methods and Principles for Social Research*. Second Edition. Cambridge University Press.
   The graduate-level text on research design today.

Murnane, R.J. and Willett, J.B. 2010. *Methods matter: Improving causal inference in educational and social science research.* Oxford University Press.
   A Masters-level textbook with a focus on education policy analysis.

Wickam, Hadley and Garrett Grolemund. 2017. *R for Data Science: Import, Tidy, Transform, Visualize, and Model Data.* O'Reilly Media. http://r4ds.had.co.nz/
   An excellent introduction to some of the more user-friendly and useful data analysis tools in R.