

**POL 280: Research Methods**  
**Spring 2023 (Syllabus Version: 1/21/2023)**  
**102 Carswell Hall: M W 12:30p-1:45p**

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**COURSE OBJECTIVES AND LEARNING OUTCOMES**

This course introduces students to basic ideas in scientific epistemology, social science research design, statistical analysis, and the application of all these ideas to substantive questions in political science.

Students will be able to:

1. read, understand, summarize, and evaluate social scientific research that uses quantitative and qualitative evidence;
2. evaluate the strengths and weaknesses of common research designs, including mistakes related to faulty statistical reasoning such as confounding and publication bias;
3. create visualizations and tabulations for description and inference using quantitative data sets in R/RStudio;
4. apply all the above skills to examples taken from the political science literature and/or products of data journalism.

The course design is the product of combined (and ongoing) effort by many scholars at Emory, Rice, and Wake Forest over many years to refine the teaching of research methods to undergraduate political scientists. These scholars include Sara Dahill-Brown, Eric Reinhardt, Betina Wilkinson, Rick Wilson, and Chris Zorn.

**GRADING POLICIES AND ASSIGNMENT DETAILS**

**Grade Components:**

- Discussion Group Responses 20%
- Midterm Exam: 35%
- Small Group Participation: 10%
- Final Exam: 35%

**Grading Scale:**

100%-93%: A	82.9%-80%: B-	69.9%-67%: D+
92.9%-90%: A-	79.9%-77%: C+	66.9%-63%: D
89.9%-87%: B+	76.9%-73%: C	62.9%-60%: D-
86.9%-83%: B	72.9%-70%: C-	>59.5%: F

**Small Group Discussion:** Everyone in class will be randomly assigned to a small group. Each group must meet and discuss the discussion questions (including assignments that involve RStudio, where applicable). Grading for this assignment is 100% or 0% based on attendance and active participation in the discussion. The grade will be assessed by your peers; after each meeting, your group will indicate on Canvas who meaningfully participated in the discussion and those who did so will receive full credit. Ten missed attendances for the Small Group Discussion will be dropped; the rest will be averaged to form this portion of the grade.

**Discussion Responses:** Discussion questions will be distributed in advance of each day's readings. At the beginning of class, a question will be randomly selected. All students will have ten minutes to write a response by hand. These questions may involve analysis in RStudio. You are permitted to use your notes to assist you with these response questions (including using results from RStudio that you created prior to class), and I recommend that you use the small group discussion to workshop your ideas for this response. However, *each student must write their own response; a group cannot all submit identical responses.* Ten missed discussion responses will be dropped; the rest will be averaged to form this portion of the grade.

**Quizzes:** A diagnostic quiz will be assigned at the beginning of the semester, and a review quiz will be assigned at the end. These instruments are designed to help me understand what you learned during class and to help you prepare for the final exam. **No class materials, references, other students, or anyone except Dr. Esarey may be consulted during a quiz. The diagnostic quiz will be graded for completion only, but the review quiz will be graded for correctness.** Both quizzes will be counted as discussion responses for the purpose of grading.

**Attendance:** Regular attendance is typically a prerequisite for success in the class, although no points are deducted because of an absence alone. Anything taught in class is testable material, and not everything I teach in class is guaranteed to be in the course reading material.

**Exams:** There will be two exams in this class, a midterm and a final. All exams are cumulative but will focus on material learned since the last exam. Exams will be take-home; you will be bound by the honor system when taking the exam. You may take as much time as you like to complete the exam, but you must submit the exam before the due date and time. (The exams are designed to be completed in about 90 minutes.) **Class notes, RStudio code scripts created by Dr. Esarey for the class, and textbooks may be consulted during an exam. No other materials may be used. No one except Dr. Esarey may be consulted during an exam, and no internet sources may be consulted.**

## ASSIGNMENT POLICIES

1. **Discussion responses and small group participation credits MAY NOT BE TAKEN LATE OR RESCHEDULED, including due to short-term illness or one-off academic or scholarly activities. Ten missed responses/group meetings, corresponding to over 35% of class meetings, are already dropped from the grade to account for these circumstances.** Exceptions to this policy will only be made in unusual circumstances on a case-by-case basis. If you develop a severe illness that you believe will interfere with your ability to complete more than a few discussion responses or small group discussions, please contact Dr. Esarey immediately.
2. **Discussion responses WILL NOT BE GRADED unless the student attends the full class period. If a student comes to class to complete the discussion response and then leaves, the response will not be graded.**
3. **Students are responsible for submitting working, uncorrupted files for all assignments.** If a file is corrupted and needs to be re-sent, and re-sending happens after the assignment deadline, a late penalty will be assessed.
4. **Assignments are due at the date and time I specify for the assignment.** Late exams will be marked off at 5 percentage points for the first hour late, and an additional 10 percentage points for every subsequent hour late.
5. **Failing to take the exam during the scheduled time window will result in no credit for the exam.** Exams may be re-scheduled only under the following three circumstances:
  - a. a death in the immediate family (parent, spouse, sibling, or child) within two weeks before the exam due date;
  - b. an unforeseeable and significant illness or medical emergency affecting you, your spouse, or your child; or
  - c. participation in a Wake Forest-sponsored academic or sporting event.

In the event of (a) or (c), you must give me **at least 24 hours advance notice and preferably more** (via e-mail or a phone call) that you will miss the exam, or it may not be made up. I may require supporting documentation. All penalty waivers are at the discretion of the instructor. Under these circumstances, I will extend your due date and/or schedule you a make-up exam time. **Conflicts with a work schedule, job interview, non-academic trip, or vacation are not a valid reason to miss an exam or any other assignment** and cannot be the basis for a penalty waiver.

## OTHER COURSE POLICIES

**Honor Code/Academic Misconduct:** All forms of academic misconduct will be handled according to the Wake Forest University Honor Code. Details on the Honor Code are available at <https://studentconduct.wfu.edu/honor-system-wfu/>.

If you ever have any questions about what you should do to stay within the honor code on a particular assignment, **contact me with your question and I can assist you**. I cannot guarantee a timely response unless you contact me at least 24 hours in advance of the time the assignment is due.

**Teaching Assistant:** Jessy Ren, a veteran of POL 280, will serve as Teaching Assistant for the course. Her email address is [renz19@wfu.edu](mailto:renz19@wfu.edu). Her office hours will be announced during the first week of class.

**Students with Disabilities:** If you have a disability and require accommodation in this class, please contact me as soon as possible (within the first two weeks of class) to discuss these accommodations. You will also need to contact the Disability Services Office (telephone extension: 5929) in 118 Reynolda Hall. More information is available at <https://lac.wfu.edu/disability-services/>.

**Syllabus Change Policy:** All policies of this syllabus may be changed by Prof. Esarey with advance notice.

## COURSE MATERIALS

### Required Texts:

- Wheelan, Charles (2013). *Naked Statistics*. New York: W.W. Norton and Co. This book provides an easier-to-understand introduction to statistical concepts.
- Kellstedt and Whitten (2018). *The Fundamentals of Political Science Research, Third Edition*. Cambridge University Press. This book provides a more in-depth coverage of concepts in research design and statistical analysis. This is abbreviated as “FPSR” in the Course Outline/Assigned Readings.
- Kellstedt and Whitten (2021). *An R Companion for the Third Edition of The Fundamentals of Political Science Research*. Oxford University Press. This book covers the use of R for applied data analysis. This is abbreviated as “R Companion” in the Course Outline/Assigned Readings.

Other readings are available on the Canvas website.

**Software:** This course will teach statistical analysis using R. We will be using a server that is specially configured for R. You will need your computer (or a tablet) and a browser. All students must have a valid Wake Forest e-mail address and login (and access to the Canvas website) to participate in this course.

To use R/RStudio and access related class materials, go to <https://rstudio.cloud/>. You should have received an e-mail from me inviting you to join the course's workspace. You will need to sign up for a student account, which costs \$5 a month. From here, you will gain access to the software and materials needed to complete the course.

If you wish to install a copy of R and RStudio on your home computer, R is free and available for Windows and Macintosh from <http://cran.r-project.org/>. RStudio is also free and available for Windows and Macintosh at <http://www.rstudio.com>.

## COURSE OUTLINE AND ASSIGNED READINGS

Date	Topic	Readings
1/9	Introduction and RStudio Setup	1. R Companion, Chapter 1
1/11	Quick Start: How to read a social scientific journal article	1. Raff, "How to read and understand a scientific paper: a guide for non-scientists." URL: <a href="https://bit.ly/2uHBjB9">https://bit.ly/2uHBjB9</a> 2. Mason, Wronski, and Kane. 2021. "Activating Animus: The Uniquely Social Roots of Trump Support." <i>American Political Science Review</i> 115(4): 1508-1516. URL: <a href="https://bit.ly/3cfUJUF">https://bit.ly/3cfUJUF</a> .
1/13	<b>Diagnostic Quiz Due on Canvas (take at home)</b>	
1/16	<b>No Class: Martin Luther King, Jr. Day</b>	
1/18	Quick Start: How to read a linear regression results table in a quantitative article	1. Long, "10 Things to Know About Reading a Regression Table." URL: <a href="https://egap.org/resource/10-things-to-know-about-reading-a-regression-table/">https://egap.org/resource/10-things-to-know-about-reading-a-regression-table/</a> 2. Schafer et al. (2021). "Making Unequal Democracy Work? The Effects of Income on Voter Turnout in Northern Italy." <i>American Journal of Political Science</i> 66(3): 745-761. URL: <a href="https://doi.org/10.1111/ajps.12605">https://doi.org/10.1111/ajps.12605</a> .
1/23	What is science? Is political science a science?	1. FPSR, Ch. 1. 2. Karl Popper, "Science as Falsification." URL: <a href="https://bit.ly/35I6E3W">https://bit.ly/35I6E3W</a>
1/25	Creating research questions, theories, and hypotheses	1. FPSR, Ch. 2
1/30	Transparency and replicability	1. Open Science Collaboration. 2015. "Estimating the Reproducibility of Psychological Science." <i>Science</i> 349(6251). URL: <a href="https://bit.ly/3a0NdGT">https://bit.ly/3a0NdGT</a>
2/1	<b>Class Cancelled</b>	
2/6	Causal Inference	1. FPSR, Ch. 3
2/8	Experiments	1. FPSR, Ch. 4 up to and including Section 4.2.3. 2. Lupu and Wallace (2019). "Violence, Non-Violence, and the Effects of International Human Rights Law." <i>American Journal of Political Science</i> 63(2): 411-426. URL: <a href="https://doi.org/10.1111/ajps.12416">https://doi.org/10.1111/ajps.12416</a>
2/13	Field and Quasi-Experiments	1. Lyall (2009). "Does Indiscriminate Violence Incite Insurgent Attacks?" <i>Journal of Conflict Resolution</i> 53(3): 331-362. URL: <a href="https://www.jstor.org/stable/20684590">https://www.jstor.org/stable/20684590</a>

2/15	Cross-Sectional, Time-Series, and TSCS Observational Designs	<ol style="list-style-type: none"> <li>1. FPSR, Ch. 4 from Section 4.3 to the end</li> <li>2. Esarey and Chirillo (2013). "Fairer sex' or purity myth? Corruption, gender, and institutional context." <i>Politics and Gender</i> 9(4): 361-389. URL: <a href="https://doi.org/10.1017/S1743923X13000378">https://doi.org/10.1017/S1743923X13000378</a></li> </ol>
2/20	Case Studies: Mill's Methods	<ol style="list-style-type: none"> <li>1. Bram van Heuveln. 2000. "A Preferred Treatment of Mill's Methods." <i>Informal Logic</i> 20(1): 19-42. URL: <a href="https://doi.org/10.22329/il.v20i1.2252">https://doi.org/10.22329/il.v20i1.2252</a></li> </ol>
2/22	Case Studies: Application	<ol style="list-style-type: none"> <li>1. Reyes-Housholder, Catherine. 2019. "A Constituency Theory for the Conditional Impact of Female Presidents." <i>Comparative Politics</i> 51(3): 429-449. URL: <a href="https://www.jstor.org/stable/26663938">https://www.jstor.org/stable/26663938</a></li> </ol>
2/27	<b>Midterm Exam Distributed</b>	
2/27	Process Tracing	<ol style="list-style-type: none"> <li>1. Collier (2011). "Understanding Process Tracing." <i>PS: Political Science and Politics</i> 44(4): 823-830. URL: <a href="https://goo.gl/ByHNZa">https://goo.gl/ByHNZa</a></li> <li>2. "Teaching Process Tracing: Examples and Exercises." Read "The Adventure of Silver Blaze" at the end of this article (available on Canvas).</li> </ol>
3/1	Focus Groups	<ol style="list-style-type: none"> <li>1. Stewart et al. (2008). "Group Depth Interviews: Focus Group Research." Chapter 18 in <i>The Sage Handbook of Applied Social Research Methods</i> (available on Canvas).</li> </ol>
3/5	<b>Midterm Exam Due</b>	
3/6	<b>No Class: Spring Break</b>	
3/8	<b>No Class: Spring Break</b>	
3/13	Ethics and Social Science	<ol style="list-style-type: none"> <li>1. Yale IRB Training, "Introduction/Ethical Overview" (available on Canvas): "Introduction", "Respect for Persons", "Beneficence", "Justice", and "The importance of conducting research ethically."</li> </ol>
3/15	Measurement, Reliability, and Validity	<ol style="list-style-type: none"> <li>1. FPSR, Ch. 5</li> </ol>
3/20	Descriptive Statistics and Graphs I	<ol style="list-style-type: none"> <li>1. Wheelan, Ch. 2 including appendix</li> </ol>
3/22	Descriptive Statistics and Graphs II	<ol style="list-style-type: none"> <li>1. FPSR, Ch. 6</li> <li>2. R Companion, Ch. 6</li> </ol>

3/27	Central Limit Theorem	1. Wheelan, Ch. 8
3/29	Statistical Inference I: Confidence Intervals	1. Wheelan, Ch. 9, pp. 143-168 2. FPSR, Ch. 7 3. R Companion, Ch. 7
4/3	Statistical Inference II: Crosstabs and Chi-Squared	1. FPSR, Ch. 8 up to and including Section 8.4.1 2. R Companion, Ch. 8 Sections 8.1 and 8.2
4/5	Statistical Inference III: Difference of Means Tests	1. FPSR, Ch. 8, Section 8.4.2 2. R Companion, Ch. 8 Section 8.3
4/10	Statistical Inference IV: Correlation Coefficients	1. FPSR, Ch. 8, Section 8.4.3-8.5 2. R Companion, Ch. 8, Section 8.4
4/12	Regression I: a “Best Fit” line	1. FPSR, Chapter 9 up to and including Section 9.4.3 2. R Companion, Ch. 9
4/17	Regression II: Coefficient Hypothesis Testing and Assumptions	1. FPSR, Chapter 9 from Section 9.4.3 to end
4/19	Regression III: Multiple Predictors	1. FPSR, Chapter 10
4/24	Constructing a Literature Review	1. Miller (2017). “How to do a Literature Review.” URL: <a href="https://www.dropbox.com/s/q6j5zfg5ctbbynd/svm-literature-review.pdf?dl=0">https://www.dropbox.com/s/q6j5zfg5ctbbynd/svm-literature-review.pdf?dl=0</a> 2. Knopf (2006). “Doing a Literature Review.” <i>PS: Political Science and Politics</i> 39(1): pp. 127-132. URL: <a href="https://www.jstor.org/stable/20451692">https://www.jstor.org/stable/20451692</a>
4/26	Clean-up and Review Day	
4/28	Review Quiz Due on Canvas	
4/28	Final Exam Distributed (take home)	
5/5	Final Exam Due	