

## PS103: Political Science Research Methods (also CVS148)

**\*\*last revised 8/24/23\*\***

### **Main information:**

Fall 2023

#### *Professor:*

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#### *Class meets:*

BLOCK R+: Mon. & Wed., 9:00am – 10:15am, Tisch Library Data Lab

#### *Office hours:*

Tuesdays, 1:00-3:00pm (in person, though we can have a Zoom meeting if that works better). Book office hours at <https://calendly.com/deborahschildkraut>. Once you sign up for a meeting, you will get a confirmation email with a link you can use to change or cancel the appointment. Email me to set up appointments for other times.

Data lab assistants are also available for software consultation both in person and via live chat. You can view their schedule here: <https://sites.tufts.edu/datalab/services-support/student-lab-assistants/>. Scroll down to see the assistant skills matrix for additional useful information.

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### **Course description:**

This course introduces the use of quantitative methods for investigating political issues such as campaigns and elections, the death penalty, public opinion about candidates, and other policies. Students will learn how to collect, analyze, and present data. The course emphasizes hands-on training that will provide useful skills for academic and professional settings. Most readings and assignments emphasize politics in the United States, though the skills we develop are useful for many aspects of political science.

The first portion of the course focuses on questions of research design and on several research methods commonly used in political science, such as content analysis, surveys, and experiments. The remainder of the course will be an introduction to quantitative methods through applied statistics. We cover several methodological issues, including measurement and presentation, and statistical procedures, including confidence intervals, hypothesis testing, correlations, and regression. The emphasis is on achieving an intuitive understanding of central concepts and on using computers for data analysis. The goal of the course is for you to become critical consumers of empirical social science research as well as competent producers of your own research. Graded coursework includes problem sets and a final exam.

This course fulfills the Political Science Department's methodology requirement. It is **NOT** part of any subfield in the major (IR, Comparative, Theory, or American). It satisfies the University's math distribution requirement. It **does not** satisfy a social science distribution requirement.

### **Course format and requirements:**

Class meets twice per week in either a lecture or workshop format. No prior data analysis or statistics background is necessary. The prerequisite is that students must have already taken one of the core foundation Political Science courses (11, 21, 41, 42, 61) or a first-year colloquium in PS.

View the **syllabus** to see what is assigned and planned for each day.

View the relevant **Canvas** module to access the necessary materials for that day.

If you miss class: (1) let me know, (2) see slides posted on Canvas, and (3) seek notes from a classmate. Then see me if you want to go over the missed material. ***Do NOT come to class if you feel sick.***

You are expected to come to class prepared to discuss issues raised in the readings. Read the assignments *before class* on the date they are listed. For days where there is more than one reading, please read the items in the order in which they appear on the syllabus.

### **Required readings:**

For many research techniques we cover, the readings consist of a methodological piece that explains the technique and a substantive article or chapter in which the technique is used in practice. The following book is required reading and is on sale at the bookstore:

1. Janet Buttolph Johnson, H. T. Reynolds, and Jason D. Mycoff. 2020. *Political Science Research Methods*, 9<sup>th</sup> edition. (JRM).

There are additional required readings posted on Canvas. They appear in the Readings module in the order that they are assigned.

**SKIM:** Occasionally, you are asked to **skim** a reading. "**Skim**" means you should be able to discuss the main idea of the reading, but you will not be held responsible for specific details.

### **Course website on CANVAS:**

If you are already registered for PS103, you have access to the course website on CANVAS. There, you will find the syllabus, weekly modules, readings, and other resources you may find useful as you work on assignments. I use CANVAS to send emails regarding announcements and possible syllabus changes or updates, and you need CANVAS to complete assignments. CANVAS automatically uses your "tufts.edu" email address; if this is not your preferred email address, make sure that emails sent to you through CANVAS are forwarded to the appropriate location. It is your responsibility to make sure that you receive **and read** class emails.

If you have trouble with CANVAS, see me or send a request for help to [canvas@tufts.edu](mailto:canvas@tufts.edu). Technology help for students is available at: <https://it.tufts.edu/technology-students>.

Note: if you click on a link for a reading and it doesn't open, try clicking on where it says to open the file in a new window (near the top of the page).

### **Important dates:**

Wed, Sept. 27: Problem set #1 due  
Mon, Oct. 9: NO CLASS: Indigenous People's Day  
Tues, Oct. 10: Last day to drop a course  
Mon, Oct. 16: Problem set #2 due

Wed, Nov. 8 Problem set #3 due  
Tues, Nov. 14: Last day to withdraw from a course  
Wed, Nov. 22: NO CLASS: Thanksgiving Break  
Mon, Nov. 27: Problem Set #4 due

Mon, Dec. 11: Problem set #5 due  
TUES, Dec, 19: Final exam, 12pm-2pm, location TBD

### **Assignments and grading:**

Class participation: 5%  
Problem sets: 65% (5 total: 1 = 10%, 2 = 15%, 3 = 10%, 4 & 5 = 15%)  
Final exam: 30%

All assignments are graded out of 100 points. I take off 5 points for every day that an assignment is late. I convert numbers to letters in the following manner:  
97 – 100 = A+; 94 – 96 = A; 90 – 93 = A-; 87 – 89 = B+; 84 – 86 = B; 80 – 83 = B-; 77 – 79 = C+; 74 – 76 = C;  
70 – 73 = C-; 65 – 70 = D; Below 65 = F

### **Course software:**

Completing some problem sets requires using STATA, the statistical package for our class. STATA is available for free for Tufts students. To acquire STATA through Tufts, follow instructions here: <https://access.tufts.edu/stata>.

STATA is also available on some university computers, such as group workstations in Tisch and computer labs. You can also access STATA through the Tufts Virtual Lab. To access STATA using the Tufts Virtual lab, follow the instructions here: <https://it.tufts.edu/guides/vmware-horizon-tufts-virtual-desktop-vdi/tufts-virtual-lab-vdi-desktop-client-installation>

- The virtual lab makes your screen look like you are sitting at a lab computer, so you navigate to STATA just as you would if you were using a computer in a Tufts lab. A useful user guide is available at <https://it.tufts.edu/guides/vmware-horizon-tufts-virtual-desktop-vdi>.
- When saving your files in the virtual lab, you must save them to your storage account on Box, which you can access here: <https://access.tufts.edu/box>, or to your actual computer.

Get or access STATA ASAP so you identify any trouble well in advance of the due date for Problem set 2.

### **Problem sets:**

There are 5 problem sets. They are due at the **start** of class on the day indicated in the syllabus. You can either upload them to Canvas or hand in a hardcopy. They are graded out of 100 points and lose 5 points for every day late, starting with the beginning of class on the day they are due. I encourage you to work with each other on the assignments that involve statistical analysis, although you are to hand in your own assignment and use your own words to write up the analysis and interpretation of the results. No two problem sets should have identical wording in their interpretation of results. See me if the difference between acceptable and unacceptable collaboration is unclear.

Back up your work OFTEN and in multiple places. Proper grammar, correct spelling, and appropriate citation of sources are minimum requirements for acceptable assignments. When in doubt, cite it. See me if you have questions about properly documenting sources.

Even though this class is primarily about statistics, it is still important to proofread your assignments and make sure they do not contain typos or grammatical errors. Such errors can and will hurt your grade.

### **Tufts policy on sharing course info:**

It is against Tufts policy for anyone to share any content made available in this course including course syllabi, reading materials, problems sets, videos, handouts, and exams with anyone outside of the course without the express permission of the instructor. This especially includes any posting or sharing of videos or other recordings on publicly accessible websites or forums. Any such sharing or posting could violate copyright law or law that protects the privacy of student educational records.

### **Extensions on assignments:**

While it is best to avoid extensions and having material pile up, please know that you can ask me for extensions on assignments. If you ask, please ask as far in advance as possible and suggest an alternate due date. Indicate how much additional time you think you will need, and we'll go from there.

### **Office hours:**

Office hours are a chance for you to talk with me about your coursework, the PS major, your thoughts on life after Tufts, or pretty much anything else. Office hours are by appointment at <https://calendly.com/deborahschildkraut>. Office hours are my preferred way to meet with you, but if the available times conflict with your schedule, send an email and we will find another time. Even if you

don't have particular questions or concerns, it's a good idea to meet with your professors during office hours to help them get to know you.

### **Academic integrity:**

Assignments you submit for this course will be reported to the Office of the Dean of Student Affairs if any evidence of academic dishonesty is detected. When in doubt, cite! Tufts Academic Integrity Resources can be found here: <https://students.tufts.edu/community-standards/support-resources/academic-integrity-resources>.

### **Academic Support and Accessibility Services at the StAAR Center:**

The StAAR Center offers a variety of resources to all students, and services are free to all enrolled students. You can make an appointment to work on any writing-related project or assignment, attend subject tutoring, or meet with an academic coach to hone fundamental academic skills like time management or overcoming procrastination. You can make an appointment by visiting [go.tufts.edu/TutorFinder](https://students.tufts.edu/staar-center), or by visiting <https://students.tufts.edu/staar-center>. You also take a self-assessment [quiz](#) to identify your work and study habits and connect with relevant resources. The StAAR Center is also where you should go to register for academic accommodations.

### **AI Technology:**

- Submitting work generated by AI technology without attribution is considered a form of plagiarism.
- When submitting work, any answers where you used AI technology to help craft your response requires citation, even if you are not adopting AI text verbatim.
- Assume that all facts and sources provided by AI technology are false; verify and cite the sources you used to verify.
- In an AI citation, provide (1) the prompt you used, (2) the name of the AI tool and, if available, the version, (3) the company that provides the tool, (3) the date you used it, and (4) the AI url. Note that the AI tool is NOT an author.
- Example from the Modern Language Association:  
“Describe the symbolism of the green light in the book *The Great Gatsby* by F. Scott Fitzgerald”  
prompt. *ChatGPT*, 13 Feb. version, OpenAI, 8 Mar. 2023, [chat.openai.com/chat](https://chat.openai.com/chat).

### **Register to vote:**

If you are eligible and aren't registered to vote, you can register here: <https://tufts.turbovote.org/register>.

### **Topics and Readings:**

**NOTE:** We may deviate a bit from this schedule throughout the semester, as our pace gets determined as a group. Some years, certain units take longer, while on other years, other units take longer. We will discuss in class, and via CANVAS, if any due dates change.

### Week 1:

W, Sept. 6: Introduction (no reading)

- Complete student information survey on Canvas

### Week 2:

M, Sept. 11: Studying Politics

- PS103 syllabus
- Green, Amanda Hoover. "How to Read Political Science: A Guide in Four Steps."
- JRM: Chs. 1 (skim), 2 (pp. 25-35)
- Adams, William. 2005. *Election Night News and Voter Turnout*. pp. 1 – 12 only.
- Sides, John. 2015. "Why Congress Should Not Cut Funding to the Social Sciences," *Washington Post*.

W, Sept. 13: Designing a research question and developing hypotheses

Reading:

- JRM: Ch. 4 (pp. 73-88)
- Shively, *The Craft of Political Research*, Ch. 6 (pp. 73 – 84; there are additional pages in the file on Canvas; we read those later)

### Week 3:

M, Sept. 18: Lab workshop (Excel), plus demo of websites for finding political science data

Reading:

- Sayers, Alexandria. "The Dos and Don'ts of Chart Making."

**\*\*problem set 1 distributed today\*\***

W, Sept. 20: Measurement

Reading:

- Shively, *The Craft of Political Research*, Chs. 4 (pp. 42 – 54), 5 (pp. 58 – 66)
- JRM : Ch. 4 (pp. 88-96).
- Carnes, Nicolas and Noam Lupu. 2021. "The White Working Class and the 2016 Election," *Perspectives on Politics*, 19(1).
  - Read only pp. 55-60 and 65 (starting with "What Is Going On?") – 67.
- **SKIM:** Griffin, Robert, and John Sides. 2018. "Economic Anxiety Didn't Elect Trump and It May Hurt His Party in the Midterms," *New York Times*.

### Week 4:

M, Sept. 25: Measurement, continued, and workshop on evaluating hypotheses.

Reading:

- No additional reading

W, Sept. 27: Sampling, Construction, and Implementation

Reading:

- JRM: Ch. 5 (pp. 101-111), Ch. 10 (pp. 196-202).
- Adams, William. 2005. *Election Night News and Voter Turnout*, Ch. 4 (pp. 59 – 72)
- Cohn, Nate. 2019. “No one picks up the phone, but which online polls are the answer?” *New York Times*. July 2.
- American Association of Public Opinion Research. 2021. *Task Force on 2020 Pre-Election Polling: An Evaluation of the 2020 General Election Polls; Executive Summary*
- **SKIM**: Voosen, Paul. 2014. As People Shun Pollsters, Researchers Put Online Surveys to the Test, *Chronicle of Higher Education*.
- If there is time, we will talk about your datasets for problem set 1, so come prepared to share your experience with the class.

**\*\*Problem set #1 due at start of class\*\***

### Week 5:

M, Oct. 2: Public opinion data and introduction to STATA

Reading:

- Lab handout and PS 2 codebook (to be distributed in class)
- JRM: Ch. 13 (pp. 269-277)

**\*\*problem set 2 distributed today\*\***

W, Oct. 4: Experiments

Reading:

- JRM: Ch. 6 (pp. 121-130); Ch. 9 (pp. 169-182).
- Burge, Camille, Julian Wamble, and Rachel Cuomo. 2020. “A Certain Type of Descriptive Representative? Understanding How The Skin Tone and Gender of Candidates Influences Black Politics.” *Journal of Politics* 82(4): 1596-1601.
- Adams, William. 2005. *Election Night News and Voter Turnout*, Ch. 5 (pp. 75- 81).
- Vedantam, Shankar. 2008. “Your Neighbors Could Find Out, So You’d Better Vote,” *Washington Post*.

### Week 6:

M, Oct. 9: NO CLASS

W, Oct. 11: Content analysis and Descriptive Statistics

Reading:

- JRM: Ch. 10 (pp. 194-196).
- Ridout, Travis, Erika Franklin Fowler, and Michael M. Franz. 2021. “Spending Fast and Furious: Political Advertising in 2020.” *The Forum* 18(4): 465-492.
  - Read only pp. 465-466, 477-481. Also see fig 11 (p482) and fig 12 (p483).

### **Week 7:**

M, Oct. 16: Descriptive statistics

Reading:

- JRM: Ch. 11 (pp. 211-226)
- Agresti: pp. 41 – 46
- **\*\*problem set 2 due today\*\***

W, Oct. 18: Descriptive statistics workshop

- No additional reading
- **\*\*problem set 3 distributed today\*\***

### **Week 8:**

M, Oct. 23: Descriptive statistics exercise with Excel and STATA

- No additional reading

W, Oct. 25: Probability distributions and z-scores

Reading:

- JRM: Ch. 12 (pp. 239-243), and re-read pp. 104-108.
- Agresti: pp. 72-73 and 82-91.

### **Week 9:**

M, Oct. 30: More on probability distributions and z-scores, plus distribution exercise

- No additional reading

W, Nov. 1: Probability distributions lab workshop

- No additional reading

### **Week 10:**

M, Nov. 6: Confidence intervals and the T-distribution

Reading:

- JRM: Ch. 12 (pp. 243-249)
- Agresti: pp. 103 – 112

W, Nov. 8: Significance Tests

Reading:

- Agresti: pp. 140-145; 147-149; 152-153

**\*\*problem set 3 due\*\***



### **Week 11:**

M, Nov. 13: Significance tests, continued

Reading:

- Agresti: pp. 180 – 189
- Amrhein, Valentin, Sander Greenland, and Blake McShane. 2019. "Scientists Rise Up Against Statistical Significance," *Nature*.

**\*\*problem set 4 distributed today\*\***

W, Nov. 15: Confidence intervals and significance tests with STATA

- No additional reading

### **Week 12:**

M, Nov. 20: Bivariate data analysis: crosstabs and chi-square

Reading:

- JRM: Ch. 13 (pp. 287-289).
- Agresti: pp. 218-220

W. Nov. 22: NO CLASS

### **Week 13:**

M, Nov. 27: Bivariate regression

Reading:

- JRM: Ch. 14 (pp. 307-218)
- Agresti: pp. 256-258 and 266-271
- Shively, *The Craft of Political Research*, Ch. 8 (pp. 113 – 122).

**\*\*problem set 4 due\*\***

W, Nov. 29: Bivariate correlation

Reading:

- JRM: Ch. 14 (p. 318 only).
- Shively, *The Craft of Political Research*, Ch. 8 (pp. 122 – 129).

**\*\*problem set 5 distributed today\*\***

### **Week 14:**

M, Dec. 4: Multiple regression

Reading:

- JRM: Ch. 14 (pp. 319-324)
- Agresti: pp. 307 – 312

- Dowdle, Andrew J., Randall E. Adkins, Karen Sebold, and Wayne P. Steger. 2020. "Fundamentals Matter: Forecasting the 2020 Democratic Presidential Nomination," *PS: Political Science and Politics* 54(1): 41-46.
- Frederick, Brian. 2008. "Constituency Population and Representation in the U.S. House," *American Politics Research*. 36(3): 358 – 381.
  - Read only pp. 358 – 366 and 373 – 377.

W, Dec. 6: Regression workshop in STATA

- No additional reading

**Week 15:**

M, Dec. 11: Make up day/Review for final/course evaluations.

**\*\*problem set 5 due in class\*\***

**FINAL EXAM:** Final exam, TUESDAY, Dec. 19, 12pm-2pm, location TBD. BRING A CALCULATOR.

Note: It is your responsibility to make sure that your end-of-semester travel plans do not conflict with the final exam. Alternate exams WILL NOT be administered due to travel.