Experimental Political Science
POLSCI 345
Fall 2020

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Office Hours: immediately after class, or by appt.	Phone: 660-4306 (not this semester)
Course Website: Sakai (All Zoom meetings scheduled here. Class recordings can also be found here.)	

Course Overview

We are presented daily with a wealth of information regarding political matters, most offered as fact. Rarely are we offered reasons *why* we should believe those facts. One goal of political science, as with any science, is to provide support for, or to reject as false, those reasons. Historically that's looked a bit different in political science than in, say, physics. Whereas in physics experimental tests of formalized, predictive theories are common, in political science predictive theories and experiments to test them have been comparatively rare. The reason for that rarity is simple: there are many more moving parts in most social systems than in physical ones, as well as greater difficulties in formulating experiments that are both useful and ethical. Those problems are surmountable, though, and in recent years we've seen an explosion of experimental approaches in political science. In this hands-on class, you'll learn what experiments look like in political science, how they can test theories, and, mostly, how to formulate, run, and analyze the results from your own experiments.

The course will be split into three parts. The first part addresses two important questions: what are political science theories and how can we test them experimentally? On the theory side, we'll focus on behavioral game theory, a branch of game theory that meshes the study of rational decision-making with insights from psychology. On the empirical side, we'll focus on research design, highlighting in particular incentivized lab experiments and survey experiments, as well as some simple statistical tools. No prior experience on either side is necessary or expected: we will start at the beginning and focus on techniques most useful for experimental political science. Two brief problem sets during this part will serve as both practice and assessment. Before each of the three weeks of classes in this part of the course, you will watch a series of video modules that will provide background content on theory and empirics. Class sessions will be devoted to questions, discussion, and practice.

The second part delves into lab experiments: we'll use behavioral games and incentivized experiments to explore different forms of political behavior. We won't just read articles that do that, though. Instead, first, during class, we will collectively play a few published games,

breaking them down to see how they work and how they test the theories they are intended to test. Second, once we have a good sense for how games as experiments work in practice, you'll create, run, and concisely write up results from your own experimental games. Please note that you are not required to produce a wholly original piece of research, though you are free to do so: you may also perform a replication of existing work, as long as you derive some new insight from it. In addition to playing and working through games, class sessions and office hours will be devoted to helping you develop your ideas. We'll provide comments on an outline and a draft of your writing as well, to further aid you.

The final part of the course moves to the field, where most experimentation in political science takes place due in part to concerns of external validity. We'll focus on survey experiments, and again won't just read articles: we'll take the surveys in class and break them down to understand how they test the theories they are intended to test. Once we've done that, you'll create, field, and write up results from your own survey experiment that you'll administer to a student population. Again, in addition to taking and working through surveys, class sessions and office hours will be devoted to helping you develop your ideas, and we'll provide comments on an outline and a draft of your writing to further aid you.

Course Goals

This course has two main goals. The first is to provide you with the tools and experience necessary to fairly assess the veracity of potential political facts. Since the best way to learn is by doing, that's mainly how you'll develop those tools: by designing and running your own experiments. As a bonus, you'll also get the opportunity to explore what it's like to search for your own answers to questions that interest you.

The second goal is to provide you with a set of tools that will be useful across a wide range of careers. Everything from medicine to law to policy assessment to marketing research makes use of experimental methods and the tools we'll learn. Law, for example, can require an understanding of the factual basis for claims, a basis often derived from experimental methods. Further, the ability to convey research results to diverse audiences in a concise and effective way is broadly useful, and our focus on clear scientific writing will help you do that as well.

Course Requirements

In order to produce the best chance of achieving both course goals, course assessment will be a bit different from what you may be used to experiencing. Rather than the typical weighted average of individual assignments that produces a final grade, we'll be using a form of specifications grading. Each of the grade components listed below will be assessed as either satisfactory or unsatisfactory. The bundle of satisfactory components completed by the conclusion of the course will determine your grade according to the rubric at the end of this section. Though "Satisfactory" in this context will be a higher bar than "Pass" in a Pass/Fail class, in many cases you will have the opportunity to revise unsatisfactory components should

you choose to do so. A significant benefit of this approach to assessment is that it allows for greater flexibility, both in terms of student work time and in terms of the types of assignments that can be offered. With respect to the latter, because the course assignments are challenging, only the very highest grades require completion of all components. You can still do very well in the course if, for example, you run out of time to turn your draft into a finished product or have trouble with one of the problem sets.

Grade Components:

1. **Two Problem Sets:** During the first part of the course there will be two problem sets. One will cover behavioral game theory, the other research design and basic statistical tests useful for experiments. You are welcome to work together on these, but each person's work must be written up independently, and all work must represent an understanding of all parts of the problem set. You will submit each problem set to your dropbox on the course's Sakai website by its due date; no late assignments will be accepted. Solutions will be made available on Sakai at this time. After this point you will have a week to figure out, with the help of the solutions, where you might have gone wrong, and why. You will each then provide detailed comments (in the form of comments embedded in the original document you turned in) that identify any incorrect points and explain and justify how each question should have been answered. You will turn in these commented assignments to your dropbox on Sakai, leaving the original assignment in the folder as well. A satisfactory assessment for each problem set entails completing the problem set and its revision on time, showing substantial effort on the first submission, and evincing clear understanding of all problems on the second submission. Do not put problem sets off until the last minute! The earlier you start, the more help you can expect.
2. **Two Research Paper Outlines:** For each of the two experimental write-ups, you will first turn in an outline. Each outline should: (i) state clearly your research question; (ii) briefly list relevant experimental or observational research that you may be building off of or that relates to your experiment; and (iii) provide a sketch of your experimental research design, including possible threats to inference (we will discuss these in the first part of the course). Outlines should be no more than two single-spaced pages, and bullet points are encouraged. We will provide comments on your outlines within a week of your turning them in. Comments will be intended to: i) help nail down your research design; ii) ensure that all required pieces of your research report will be included; and iii) ensure that your research report will be clearly presented and make a strong case. There is one earlier and one later date by which to turn in each outline listed on the course outline below. Students will be randomly assigned one of these turn-in dates. Those who are assigned the earlier date to turn in their lab experiment outline will be assigned the later date to turn in their survey experiment outline, and vice versa. Students can turn in outlines earlier as well. Regardless, each outline must be turned in *before* you run the corresponding experiment. The faster you complete the outline and turn it in, the faster you can get to running your experiments, which we will do during class. A satisfactory outline will accomplish all its aforementioned requirements. Unsatisfactory outlines can be revised and turned in again once, if done within three days after receiving comments. All outlines should be submitted to your Sakai dropbox.

3. **Two Research Paper Drafts:** For each of the two experimental write-ups, after turning in an outline and completing the experimental research, you will turn in a draft of your research paper. You will be targeting a diverse audience with your writing, and so your goal is to be concise, clear, and effective. Each research paper will be no more than 2000 words, not including figures. Research papers must include: (i) an opening paragraph that states your research question and describes why it is interesting; (ii) a brief summary of the theory you are testing and what has already been done in the literature to understand it or related theories; iii) a brief summary of your experimental procedure; iv) a brief summary and discussion of your results; and v) a brief concluding paragraph wrapping it all up. Your draft should not present fine details of any of your work. We will provide comments on your draft within a week of your turning it in. Comments on each draft will be focused on: i) improving the clarity of your writing so that a lay person could read and understand the experiment and its findings; and ii) correcting errors in your analysis. A satisfactory draft will require few comments of either type and will include all required elements. There is one earlier and one later date by which to turn in each research draft listed in the course outline below. Students assigned the earlier date for an outline will also be assigned the earlier date for the corresponding draft. Each draft is due *before* you write your final research paper. Unsatisfactory drafts can be revised and turned in again once, if done within three days after receiving comments. All drafts should be submitted to Sakai dropbox. *Please note: Drafts are the most important of all the assignments, and you will not be allowed to turn in a final research paper covering an experiment until you receive a satisfactory assessment on your draft. This is reflected in the grading rubric below.*

4. **Two Final Research Papers:** For each of the two experimental write-ups, after you have received a satisfactory assessment on your draft you will turn in a final research paper. This paper must include all the same components as its draft; indeed, its text can be identical to a satisfactory draft. But it must also contain an appendix, of any length, that provides the fine details of your theory, experiment, and analysis, as well as any additional analyses you care to show. Each final research paper is due by the date listed on the course outline below, and no extensions will be given. A satisfactory final paper satisfies all the requirements of the draft, and additionally provides sufficient details in the appendix so that another person could replicate your results by conducting your experiment themselves. You will not be able to revise unsatisfactory final papers. All final papers should be submitted to Sakai dropbox. Comments on the final paper will highlight remaining areas for improvement as well as directions in which the project could go should you be interested in continuing to work on it.

5. **Attendance:** The degree to which learning-by-doing will occur during class time suggests that attendance will be particularly important. Accordingly, to achieve satisfactory completion of the attendance component of the course, you can miss at most three class sessions, not including any accommodated absences as per Duke University policy. That said, allowances must be made during a pandemic, and I have no interest in placing an undue burden on anyone should events intervene to make attendance difficult at times. Thus, a class session will be counted as attended *either* if it is attended live via zoom, *or* if the student watches the recording of the class *and* writes and deposits in Sakai's dropbox a one-page memo describing takeaways from that missed class. The memo should be uploaded to dropbox within a reasonable time

frame, with the precise definition of reasonable left deliberately vague to account for shifting circumstances.

Grading Rubric:

For each grade, there is an associated bundle of satisfactorily assessed components. To find your grade, simply match your bundle to the grade below. In most cases the rubric just counts missing components, but missing drafts of research papers are special cases because they signify that you did not satisfactorily complete one of the major pieces of the course *and* you didn't write the accompanying full paper either, since you must turn in a draft before writing it. There are multiple bundles associated with some grades as well. We will discuss grading further the first day of class.

- A+: All available components satisfactorily completed, plus one or both experiments is original (i.e., not a replication of existing work).
- A: All available components satisfactorily completed.
- A-: Missing one component.
- B+: Missing two components.
- B: (i) Missing three components with none being a draft; (ii) Missing two components, including one draft.
- B-: (i) Missing four components with none being a draft; (ii) Missing three components, including one draft.
- C+: (i) Missing five components with none being a draft; (ii) Missing four components, including one draft.
- C: (i) Missing five components, including one draft.
- C-: (i) Missing six components, including one draft; (ii) Missing four components, including both drafts.
- D+: (i) Missing seven components, including one draft; (ii) Missing five components, including both drafts.
- D: Missing six components, including both drafts.
- D-: Missing seven components, including both drafts.
- F: Missing eight or more components.

Readings and Videos

All readings and videos for this course are listed in the course outline below. All readings have been posted to Sakai for your convenience, and can be found under the Resources tab. Links to all videos are in this syllabus. In the first part of the course, all required readings are to be done, and all required videos are to be watched, *before* each week's classes. Those readings and videos relate to the methods we will be learning. Readings for the second and third parts of the course are representative of the examples being discussed in class, and are intended to be read *after* each week's classes. Students, particularly those lacking specific methodological training, should focus on four things in each reading during the second and third parts of the course: i) the substantive research question; ii) the theory being tested; iii) the

research design being offered as a test of the theory; and (iv) the results of the experiment. We will discuss all methods in class. In all cases, readings were chosen to be a very small sample of important research and to illustrate points I desire to make in class. Note that the reading/watching load for this class is intended to be light and heavily front-loaded in the first three weeks: we'll be learning by doing, primarily, and most of your time outside of class in the last two parts of the course will be allocated to active research and writing. One source that might be of particular use to you, though, is the *Cambridge Handbook of Experimental Political Science* (abbreviated **CHEPS** below and on Sakai).

A Note on Writing

As the research write-up is supposed to satisfy academic standards, it is important that all students be familiar with standard requirements for source citation and use. The university offers several resources to aid students with this, which may be found at these links: https://library.duke.edu/research/citing, https://library.duke.edu/research/plagiarism, and https://twp.duke.edu/twp-writing-studio/resources-students/sources.

The Academic Resource Center

The Academic Resource Center (ARC) offers free services to all students during their undergraduate careers at Duke. Services include Learning Consultations, Peer Tutoring, Learning Communities, ADHD/LD Coaching, Outreach Workshops, GRE/MCAT Prep, Study Connect, and more. Because learning is a process unique to every individual, we work with each student to discover and develop their own academic strategy for success at Duke. Contact the ARC to schedule an appointment. Undergraduates in any year, studying any discipline can benefit!

CONTACT INFO:

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919-684-5917

211 Academic Advising Center Building, East Campus – behind Marketplace.

Course Outline (All Assignments Are Due Before Midnight of the Due Date)

Part I: Experiments in Political Science, Models, and Methods

Week 1 (Aug 18, 20): Theories, Hypotheses, Measurement, and Causality
Readings and Videos: **CHEPS** 1-41, Lecture 1, Modules 2-8 of the Intro to Empirical Methods course found here:
https://www.youtube.com/playlist?list=PLfbqimfWu_yNR7wdmb-AXI2UGaI5XAOlM
Assignments: None
Sample of experimental papers discussed in class (for reference only):

- Chong, Dennis, and James N. Druckman. "Dynamic public opinion: Communication effects over time." *American Political Science Review* (2010): 663-680. http://www.jstor.com/stable/40982891
- Fisman, Raymond, and Edward Miguel. "Corruption, norms, and legal enforcement: Evidence from diplomatic parking tickets." *Journal of Political Economy* 115.6 (2007): 1020-1048.
- Habyarimana, James, et al. "Why does ethnic diversity undermine public goods provision?." *American Political Science Review* (2007): 709-725. http://www.jstor.com/stable/27644480
- Lyall, Jason, Graeme Blair, and Kosuke Imai. "Explaining support for combatants during wartime: A survey experiment in Afghanistan." *American Political Science Review* 107.4 (2013): 679-705. http://www.jstor.com/stable/43654029
- Paluck, Elizabeth Levy, and Donald P. Green. "Deference, dissent, and dispute resolution: An experimental intervention using mass media to change norms and behavior in Rwanda." *American Political Science Review* (2009): 622-644. http://www.jstor.com/stable/27798529
- Tomz, Michael R., and Jessica LP Weeks. "Public opinion and the democratic peace." American Political Science Review (2013): 849-865. http://www.jstor.com/stable/43654037
- White, Ismail K., Chryl N. Laird, and Troy D. Allen. "Selling Out?: The politics of navigating conflicts between racial group interest and self-interest." *American Political Science Review* 108.4 (2014): 783-800. https://www.cambridge.org/core/services/aop-cambridge-core/content/view/067DAC12A46715BAFAF1172F239AEA1F/S000305541400046Xa.pdf/selling_out_the_politics_of_navigating_conflicts_between_racial_group_interest_and_selfinterest.pdf
- Young, Lauren E. "The psychology of state repression: Fear and dissent decisions in Zimbabwe." *American Political Science Review* 113.1 (2019): 140-155. http://www.laurenelyssayoung.com/wp-content/uploads/2016/05/Young_PsychPolRisk_Paper.pdf

Week 2 (Aug 25, 27): Behavioral Game Theory
Videos: Lecture 5, Modules 1-10 of the Brief Introduction to Game Theory course found here: https://www.youtube.com/playlist?list=PLfbqimfWu_yMZhPWbY-uyCrKT9iZR6loJ
Assignments: **PS 1 Handed Out on Aug 25**

Week 3 (Sep 1, 3): Hypothesis Testing
Videos: Lecture 2, Modules 1-5, 8-10 of the Intro to Empirical Methods course found here: https://www.youtube.com/playlist?list=PLfbqimfWu_yMfuicSlkRkx6_yurJt1TNv
and Lecture 3, Module 1 of the same course, found here: https://www.youtube.com/playlist?list=PLfbqimfWu_yM5IkYLyiSd_0iRhVVfl_-N
Assignments: **PS 1 Due on Sep 1; PS 2 Handed Out on Sep 1**

Part II: Lab Experiments

Week 4 (Sep 8, 10): Examples of Laboratory Experiments 1
Readings:

- Fowler, James H., and Cindy D. Kam. "Beyond the self: Social identity, altruism, and political participation." *Journal of Politics* 69.3 (2007): 813-827.
- Whitt, Sam, and Rick K. Wilson. "The dictator game, fairness and ethnicity in postwar Bosnia." *American Journal of Political Science* 51.3 (2007): 655-668.

Assignments: **PS 1 Revisions Due on Sep 8; PS 2 Due on Sep 8**

Week 5 (Sep 15, 17): Examples of Laboratory Experiments 2
Reading: Kanthak, Kristin, and Jonathan Woon. "Women don't run? Election aversion and candidate entry." *American Journal of Political Science* 59.3 (2015): 595-612.
Assignments: **PS 2 Revisions Due on Sep 15; Earlier Due Date for Lab Experiment Outlines is Sep 15**

Week 6 (Sep 22, 24): Students' Lab Games
Readings: None
Assignments: **Later Due Date for Lab Experiment Outlines is Sep 22**

Week 7 (Sep 29, Oct 1): Students' Lab Games
Readings: None
Assignments: **Earlier Due Date for Lab Experiment Research Drafts is Oct 1**

Week 8 (Oct 6, 8): Completing Students' Lab Games and Lessons Learned
Readings: None
Assignments: **Later Due Date for Lab Experiment Research Drafts is Oct 8**

Part III: Survey Experiments

Week 9 (Oct 13, 15): Examples of Survey Experiments 1
Readings:

- Wayne, Carly. "Risk or Retribution: How Citizens Respond to Terrorism." Working Paper.
- McConnaughy, Corrine M., et al. "A Latino on the ballot: Explaining coethnic voting among Latinos and the response of White Americans." *Journal of Politics* 72.4 (2010): 1199-1211.

Assignments: **Final Lab Experiment Research Paper is Due Oct 15**

Week 10 (Oct 20, 22): Examples of Survey Experiments 2
Reading: Guay, Brian, and Johnston, Chris. "Ideological Asymmetries and the Determinants of Politically Motivated Reasoning." Conditionally Accepted at *American Journal of Political Science*.
Assignments: **Earlier Due Date for Survey Experiment Outlines is Oct 20**

Week 11 (Oct 27, 29): Students' Surveys
Readings: None
Assignments: **Later Due Date for Survey Experiment Outlines is Oct 27**

Week 12 (Nov 3, 5): Students' Surveys
Readings: None
Assignments: **Earlier Due Date for Survey Experiment Research Drafts is Nov 5**

Week 13 (Nov 10, 12): Completing Students' Surveys and Lessons Learned
Readings: None
Assignments: **Later Due Date for Survey Experiment Research Drafts is Nov 12**

Nov 19: **Final Survey Experiment Research Paper is Due Nov 19**