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Applied Research Methods I

Instructor Information
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Course Information
Abbreviation: GOV 355C
Unique Number: 38303
Time: Monday 1-3:45
Room: SZB 4.414
Flags: Writing and Independent Inquiry
Website: canvas.utexas.edu

Research Lab Information
Innovations for Peace and Development
Lab Location: RLP 4.600
Lab Access Code: Email the instructor
your EID for access
Website: www.ipdutexas.org

1.   Course Description

This course is the first semester of a two-semester program that provides undergraduate students with a comprehensive introduction to the research process in political and social science. As part of this program, students attend regular classes, write a small-group research paper, and gain internship experience with Innovations for Peace and Development (IPD). Students are **required** to take both semesters of this two-semester, interdisciplinary research program.

During the first semester, the classroom part of the course covers the essential elements of applied social science research, including arguments, concepts, measures, causality, and basic statistics. Given that knowledge of statistical software, text editors, reference management software, and mapping software is essential for success in the social sciences, the course also provides training in R, LaTeX, Mendeley, Python, and ArcGIS. At the end of the first semester, students submit the research designs they have developed throughout the semester in lieu of a final exam.

During the second semester, classroom instruction covers experiments, data structures, data cleaning, hypothesis testing, measurement challenges, linear regression, as well as the basics of panel data, regression discontinuity designs, difference-in-differences, synthetic controls, and logistic regressions. Training in the above software programs continues during the second semester as well. At the end of the second semester, students complete their research projects, write-up their results in a formal paper, and present their findings to the class and at an on-campus research event.

2. Course Requirements

2.1. Prerequisite Coursework

There are no formal prerequisites for taking this course, but note that it is an upper-division undergraduate course. The course material can be technical and the time commitment is considerable.

2.2. Required Software

This course makes use of R, LaTeX, Mendeley, Excel, and ArcGIS. Prior knowledge of these software programs is not required. We will teach you the basics of all of these programs during the course.

- R. For instructions on how to freely download R and its companion program, R Studio, consult here.

- LaTeX. Windows users can freely download MiKTeX here. Mac users can freely download MacTeX here. Advanced users may want to consider downloading SublimeText, to be used in combination with Sumatra PDF (instructions here). In class, we will be using Overleaf, a program that allows users to use LaTeX online—that is, without the need to have it installed on one's computer.

- Mendeley. This reference management software program is freely available here. After learning how to use Mendeley, or one of its competitors, such as Zotero or EndNote, it will never be necessary to construct your own bibliography manually ever again.

- ArcGIS. At first, we will be using computers from the computer lab with ArcGIS already installed on them. Providing that there is student interest, we will consider obtaining a one-year license for interested students. Students can access ArcGIS in numerous computer labs on campus, including the IPD lab.

2.3. Readings

Students must purchase (or borrow from a library) the course's primary textbooks:

1. Gerring, John, and Dino Christenson. 2017. *Applied Social Science Methodology: An Introductory Guide*. Cambridge: Cambridge University Press.

2. King, Gary, Robert Keohane and Sidney Verba. 1994. *Designing Social Inquiry: Scientific Inference in Qualitative Research*. Princeton: Princeton University Press.

3. Kelstedt, Paul, and Guy Whitten. 2018. *The Fundamentals of Political Science Research*. Third Edition. Cambridge: Cambridge University Press.

For some weeks, I supplement the textbook with other required and optional readings. When these articles can be easily found on the UT Austin Library web-page, I will ask students to download the article(s) themselves—to ensure students know how to use the library website;

otherwise, I will post the article(s) on the class website, Canvas. For more information on the specific reading assignments for each week, refer to the Class Schedule (below). Optional readings are not required for each class period, and reading them will not enable students to receive extra credit. However, I may use these readings to supplement the textbook in case it is necessary to facilitate comprehension of important topics.

2.4.   Attendance, Quizzes, and Participation

All students must come to class prepared, having completed the readings <u>before</u> class. At the beginning of each class, I will give everyone a five-question (typically multiple-choice) quiz.

The quiz serves three purposes. First, the quiz will help keep track of attendance and serve as a commitment device for students to attend class and be there on time. Even if students miss questions on the quiz but are present for class, they will receive full credit toward attendance for the respective class. Overall, attendance will account for 5% of students' final grades.

Second, because the quiz will only cover the most basic ideas from the required reading, the quiz will serve as a reward: you should receive 100% every time if you read. To give students some cushion for bad days or extenuating circumstances, I will drop your lowest 2 scores. I will make no other accommodations should you miss class for any reason or arrive late and miss the quiz. In total, students' average quiz score will comprise 10% of your final grade.

Third, the quiz will help ensure students are ready to discuss the material and do not rely entirely on my lecture to learn the materials. The material is challenging, and passive learning will generally not suffice for students to perform well in the course. Because participation comprises 5% of the final grade, I will post a 1-5 cumulative score for the semester on Canvas for each student after the third class and gradually update it during the semester, as appropriate. This way, the final participation grade will not come as a surprise to students at the end of the semester. As stipulated in the Policies section of this syllabus, I will make every possible effort to ensure that students feel comfortable participating. To ensure that you receive good grade for participation, please try to make at least one meaningful contribution to discussion each class.

2.5.   IPD Internship and Workshops

Each week, the Task Team Leader from the respective Innovations for Peace and Development (IPD) teams will send students/team members assignments. On average, these assignments will take students around 5 hours to complete—i.e., depending on what is assigned for each given week. By Sunday at 11:59 p.m. each week, students will update an individual Google Sheet where they will keep track of their hours and the tasks that they complete for their IPD internship. The Task Team Leaders from the respective research team will sign-off on each student's hours. Based on these Google Sheets and feedback from the respective Task Team Leaders, students will receive a grade for their IPD internship

participation. That grade will comprise 15% of students' final grade for the course.

Students who consistently and satisfactorily complete their assignments and update their Time Sheets on-time each week will be promoted from Research Apprentice to Research Affiliate at the end of the first semester. At that time, students will also be able to add the internship to their resumes, curriculum vitae, etc.

2.6.   Meetings with the Instructor

Students must meet with me at least once during the semester before September 23. During the meetings, we will discuss progress on the research project and also your internship research experience. In case students have a work or class commitment, I will be happy to meet with them outside my designated office hours, which must be booked in advance here (Cowser). Students who do not meet with me at least once each before September 23 will lose one point toward their final grade. This requirement is in place because last-minute efforts will generally not suffice to do well in the course.

2.7.   Homework Assignments (and Extra Credit)

Homework assignments will comprise 15% of students' final grades. For each written assignment that students complete using LaTeX, they will receive two extra credit points for the particular assignment. The assignment in which students answer questions on the Ferraz and Finan (2008) article will be the only assignment in which students will not be eligible to receive the extra credit points for writing their assignments in LaTeX.

2.8.   Research Design, Sub-Assignments, and Referee Report (and Extra Credit)

Having students write a first-rate research paper is a primary goal for the course. In the past, students have produced research papers relating to foreign aid, governance, political economy, American politics, immigration, political violence, peace processes, international development, and many other topics. Many students have been accepted (and funded) to present their research at the Midwest Political Science Association meeting in Chicago, IL.

In the first semester, students will work in groups of up to three to produce a Research Design, which they will expand upon during the second semester to make a full, first-rate Research Paper. The first-semester Research Design will contain the following elements:

1. An introduction to an interesting puzzle connected to one of the novel data sets provided by IPD or answerable through an experiment

2. A clear description of the dependent variable, notably at its highest level of abstraction

3. A clear critique of an existing literature related to the group's chosen topic, covering how different independent variables have explained their dependent variable

4. A theory/argument that explains the puzzle and mechanistically traces why a proposed independent variable causes the dependent variable

5. A research design, articulating how the group plans to test the theory/argument

6. A section describing what else each team will need to do during the second semester to complete the paper.

To ensure students are progressing toward completing their Research Designs by the end of the semester, each group will need to submit the following sub-assignments:

1. An introduction [circa 2–3 double-spaced pages, due September 24]

2. A description of the dependent variable (with a revised introduction) [circa 5 doubled-spaced pages in total, due October 15]

3. A literature critique (with a revised introduction and DV section) [circa 7–8 double-spaced pages in total, due November 5]

4. A theory (with a revised intro, DV section, and lit critique) [circa 9–12 double-spaced pages, due November 19]

For each of these sub-assignments, teams will receive an extra two points if they submit their assignments using LaTeX. The introduction, literature critique, and research design sub-assignments will each be worth 5% of students' overall grades. The theory sub-assignment will be individually worth 10% of students' overall grades. All of these sub-assignments should include a bibliography, generated automatically using `Mendeley` or another program such as `Zotero` or `EndNote`, as learned during the course's second class. Students should not be wasting time by manually generating a bibliography.

I will provide feedback on all of these sub-assignments within one week of submission. Another way in which students will receive feedback is a through a required Referee Report. Through the Referee Report, groups will respectfully provide 2.5–3 double-spaced pages of feedback on another student's research design. This assignment is to be done separately for each student. The Referee Report will account for 5% of students' overall grades and will be due on November 30.

After completing all of the sub-assignments and the Referee Report, each group will submit a final Research Design. The final Research Design should incorporate feedback from all of the previous assignments and the student Referee Report as well as include a bibliography made with `Mendeley` or another program. The final Research Design will comprise 25% of students' final grades and will be due on December 11 at 12 noon.

As with the sub-assignments, the Research Design also presents an opportunity for extra credit: groups who write their paper in LaTeX will receive an two extra points toward their final grade on the Research Design. During office hours, I would be more than happy to help students who are having issues with formatting anything in LaTeX. I cannot provide the same support for anything written in Microsoft Word, Libre Office, Google Docs, etc.

2.9.   Group work notes

We are aware that group work can lead to free-riding issues, to mitigate this issue, we require every student to submit each assignment along with a description of what each member of

their team did. Specifics regarding the work each team member did should be included here. At the end of the semester you will also report the % of the work was completed by each team member and whether you believe each team member deserves a portion of the grade. Significant unsatisfactory assessments from your team members could result in up to 10% reduction of your Research Design grade.

3. Policies

3.1. Grading Rubric

Below is the breakdown of grading and whether the assignment is to be done as an individual or a group.

- Referee Report - Individual: 5%

- Attendance - Individual: 5%

- Class Participation - Individual: 5%

- Quizzes - Individual: 10%

- Introduction Sub-Assignment - Group: 5%

- Dependent Variable Section Sub-Assignment - Group: 5%

- Literature Review Sub-Assignment - Group: 5%

- Theory Sub-Assignment - Group: 10%

- Homework, including `Stata`/R Assignments - Individual: 10%

- Final Research Design - Group: 25% (with up to 10% reduction with a poor group assessment of your individual work)

- IPD Internship Evaluation - Individual: 15%

- Extra Credit: Homework Assignments - Individual: 2 potential points for submissions in LaTeX

- Extra Credit: Research Design - Group: 2 potential points for submissions in LaTeX

- Potential Penalty: Instructor Meetings - Individual: 1 potential point for not meeting with the instructor and teaching assistant before September 23.

- Potential Penalty: Research Group Evaluation - Individual: Can lose up to 10% of your final grade dependent on your level of participation.

3.2.   Grading Scale

- 92.50–100 (A)
- 89.50–92.49 (A-)
- 86.50–89.49 (B+)
- 82.50–86.49 (B)
- 79.50–82.49 (B-)
- 76.50–79.49 (C+)

- 72.50–76.49 (C)
- 69.50–72.49 (C-)
- 66.50–69.49 (D+)
- 62.50–66.49 (D)
- 59.50–62.49 (D-)
- 0–59.49 (F)

3.3.   Grade Rounding

The above grading scale already incorporates very generous grade rounding, not to mention the multitude of extra credit opportunities. Accordingly, there will be no additional rounding of grades under any circumstance.

3.4.   Grade Posting on Canvas

I will post all grades to the class website, Canvas. I will also use the option where students may discern the average score of the class. This way, students will know where they stand by the end of semester.

3.5.   Grade Appeals

If you would like to appeal your grade on any assignment, you must make the request to me in writing, over email, within 5 days of receiving your grade. In your grade appeal, you must specify the reason(s) why you think I misgraded the assignment. Acceptable reasons include those pertaining to the concepts and material covered during the course. I will not consider requests for grade changes that are not germane to the course.

3.6.   Use of Computers/Quizzes

All quizzes will be administered online through Canvas so as to reduce unnecessary touching of papers and transmission of germs. If you do not have a computer or tablet that you can bring to class, please contact me immediately. If you do not contact me, I will assume that you will bring your computer/tablet to class and will be able to take the quizzes that way. I will not bring extra paper copies of the quizzes unless a student does not have a computer or tablet.

3.7.   Office Hours

Office hours will take place both in person and over Zoom this semester. Please book all office hours, before Tuesday morning, using the booking tool on page one of this syllabus. If you do not book the time in advance, it is possible that I will have already accepted another commitment.

3.8. Flags

3.8.1. Writing Flag and Writing Quality of Papers and Assignments

This course carries the Writing Flag. Writing Flag courses are designed to give students experience with writing in an academic discipline. In this class, you can expect to write regularly during the semester, complete substantial writing projects, and receive feedback from your instructor and TA to help you improve your writing. You will also have the opportunity to revise one or more assignments, and you will be asked to read and discuss your peers' work. You should therefore expect a substantial portion of your grade to come from your written work. Writing Flag classes meet the Core Communications objectives of Critical Thinking, Communication, Teamwork, and Personal Responsibility, established by the Texas Higher Education Coordinating Board.

Against the above backdrop, I expect that students will submit their papers and assignments using proper grammar and writing, etc. I will alert students early in the semester if I see that they are having trouble with their writing so that they may seek help from the excellent UT Austin Writing Center. Because part of research involves being able to communicate in a clear writing style, the quality of exposition will be one element that I will consider when examining students' submissions.

3.8.2. Independent Inquiry Flag

This course carries the Independent Inquiry flag. Independent Inquiry courses are designed to engage you in the process of inquiry over the course of a semester, providing you with the opportunity for independent investigation of a question, problem, or project related to your major. You should therefore expect a substantial portion of your grade to come from the independent investigation and presentation of your own work.

3.9. Absences

As described in the Course Requirements section of the syllabus (above), it will be very difficult to perform well in the course if you do not attend regularly. The only absences that I will consider legitimate include those pertaining to religious holidays, illness, extenuating circumstances due to an emergency, and university-excused absences. For illnesses, you will need to either provide me with a doctor's note, or you will need to send me an email before class to inform me that you are sick and won't be attending. If you are sick and do not provide me with a doctor's note or email me before class, your absence will not be excused except under very extenuating circumstances.

3.10. Late Work

Unless you receive prior approval from me, I will not accept late final Research Designs, and I will discount most other late assignments as follows:

- 1-15 minutes: 0% (grace period for last-minute issues)

- 15 minutes-24 hours late: -10%

- 24-48 hours late: -20%

- more than 2 days late: -30%

- more than 3 days late: -50%

- more than one week: -75%

- more than two weeks: no credit offered

My philosophy on grading late work is this: if you turn it in before I start grading the assignment, I likely will not take off points unless it has been a few days. However, I often will start grading the night of the assignment (as I work well at night). So, I try to give as much grace as possible, but submit work late knowing the likely risks.

3.11. Homework Policies

Students may consult with other members of the class and/or work in groups for the Stata/R assignments but not other homework assignments. Regardless of whether students choose to work in groups on the Stata/R assignments, students must submit their own copies of their work—i.e., no group submissions. Students are also not allowed to post their homework questions on the Stack Exchange, and R help forums.

If you need help with a particular question, feel free to talk to me or the teaching assistant during our office hours. Provided that you attended the class where I covered the material at hand or missed class due to an excused absence (see above), I am very happy to help! I will not provide additional make-up training during office hours if you missed class for a non-excused absence.

3.12. Personal Pronoun and Name Preferences

Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, culture, religion, politics, sexual orientation, gender, gender variance, and nationalities. Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records.

3.13. Academic Integrity

Each student in the course is expected to abide by the University of Texas Honor Code: "As a student of The University of Texas at Austin, I shall abide by the core values of the University and uphold academic integrity." Plagiarism is taken very seriously at UT. Therefore, if you use words or ideas that are not your own (or that you have used in previous class), you must cite your sources. Otherwise you will be guilty of plagiarism and subject to academic disciplinary action, including failure of the course. You are responsible for understanding UT's Academic Honesty and the University Honor Code, which can be found at the following web address: https://deanofstudents.utexas.edu/conduct/standardsofconduct.php

3.14.   University Resources for Students

Your success in this class is important to me. We will all need accommodations because we all learn differently. If there are aspects of this course that prevent you from learning or exclude you, please let me know as soon as possible. Together we'll develop strategies to meet both your needs and the requirements of the course. There are also a range of resources on campus:

3.14.1.   Services for Students with Disabilities

This class respects and welcomes students of all backgrounds, identities, and abilities. If there are circumstances that make our learning environment and activities difficult, if you have medical information that you need to share with me, or if you need specific arrangements in case the building needs to be evacuated, please let me know. I am committed to creating an effective learning environment for all students, but I can only do so if you discuss your needs with me as early as possible. I promise to maintain the confidentiality of these discussions. If appropriate, also contact Services for Students with Disabilities, 512-471-6259 (voice) or 1-866-329-3986 (video phone). http://ddce.utexas.edu/disability/about/

3.14.2.   Counseling and Mental Health Center

Do your best to maintain a healthy lifestyle this semester by eating well, exercising, avoiding drugs and alcohol, getting enough sleep and taking some 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 available 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 like anxiety or depression, we strongly encourage you to seek support: http://www.cmhc.utexas.edu/individualcounseling.html

3.14.3.   The Sanger Learning Center

The Sanger Learning Center provides classes and workshops, private learning specialist appointments, peer academic coaching, and tutoring for more than 70 courses in 15 different subject areas. For more information, please visit http://www.utexas.edu/ugs/slc or call 512-471-3614 (JES A332).

3.14.4.   Other Helpful Offices/Centers

Undergraduate Writing Center: http://uwc.utexas.edu/
Libraries: http://www.lib.utexas.edu/
ITS: https://its.utexas.edu/
Student Emergency Services: http://deanofstudents.utexas.edu/emergency/

3.14.5. Important Safety Information

If you have concerns about the safety or behavior of fellow students, TAs or Professors, call BCAL (the Behavior Concerns Advice Line): 512-232-5050. Your call can be anonymous. If something doesn't feel right, it probably isn't. Trust your instincts and share your concerns.

The following recommendations regarding emergency evacuation from the Office of Campus Safety and Security (512-471-5767, https://www.utsystem.edu/sites/ut4u/emergency-evacuation):

- Occupants of buildings on The University of Texas at Austin campus are required to evacuate buildings when a fire alarm is activated. Alarm activation or announcement requires exiting and assembling outside.

- Familiarize yourself with all exit doors of each classroom and building you may occupy. Remember that the nearest exit door may not be the one you used when entering the building.

- Students requiring assistance in evacuation shall inform their instructor in writing during the first week of class.

- In the event of an evacuation, follow the instruction of faculty or class instructors. Do not re-enter a building unless given instructions by the following: Austin Fire Department, The University of Texas at Austin Police Department, or Fire Prevention Services office.

- Link to information regarding emergency evacuation routes and emergency procedures can be found at: https://www.utsystem.edu/sites/ut4u/emergency-evacuation

3.15. Family

I am not aware of an official university policy on children in the classroom. The following is an attempt to insure family friendliness while also maintaining a proper learning environment. [I borrowed heavily and adapted these policies from Melissa Cheyney's syllabus.]

1. All breastfeeding babies are welcome in class as often as is necessary.

2. For older children and babies, unforeseen disruptions in childcare often put parents in the position of having to miss class to stay home with a child. If needed, these incidents will be an excused absence and I will work with you to insure you learn the material. Alternatively, while this is not meant to be a long-term childcare solution, occasionally bringing a child to class in order to cover gaps in care is perfectly acceptable.

3. I ask that all students work to create a welcoming environment that is respectful of all forms of diversity, including diversity in parenting status.

4. In all cases where babies and children come to class, please sit close to the door so that if your little one needs special attention and is disrupting learning for others' students, you may step outside until their need has been met. For my part, I will work with you should you need to step out so that you can remain caught up.

5. Finally, often the largest barrier to completing your coursework once you become a parent is the tiredness many parents feel in the evening once children have finally gone to sleep. While I maintain the same high expectations for all students in our class regardless of parenting status, I am happy to problem-solve with you in a way that helps you feel supported as you strive for school-parenting balance.

4. Tentative Class Schedule, Readings, and Homework

Week 1: What Is Social Science, and What Are the Elements of a Good Research Design? (August 26)

Required Readings:

- Carefully read the course syllabus

Required Assignments:

- Complete the Syllabus Assignment where you acknowledge that you've read fully the syllabus and understand the expectations provided for you. (Due September 8th at 11:59 pm)

- Start thinking about a topic for your research

Labor Day/No class (September 2)

Week 2: Reference Management and Writing in Plain Text / LaTeX (September 9)

Required Reading and Video:

- King, Gary, Robert Keohane and Sidney Verba. 1994. *Designing Social Inquiry: Scientific Inference in Qualitative Research*. Princeton: Princeton University Press. [On Canvas]

  - Required: pages 7-9, 15-19.

  - Optional: Rest of Chapter 1.

    * This is the introductory/overview chapter to a classic book that almost all political scientists and many sociologists and economists have read. Pages 7-9 are particularly useful for understanding the rules of inference, and pages 15-19 will be useful for you as you contemplate what your research project will be for the course.

- Gerring, John, and Dino Christenson. 2017. *Applied Social Science Methodology: An Introductory Guide*. Cambridge: Cambridge University Press. [On Canvas]

  - Required: Skim Chapter 14.

  ∗ The format of the paper for this course will diverge slightly from Gerring and Christenson's (2017) prototype, because we will have an additional dependent variable section. However, the rest of the sections should converge perfectly with Gerring and Christenson (2017).

- Also Read A Short Introduction to LaTeX

- Watch this Getting Started with Mendeley video

Required Assignments:

- Start thinking about a topic for your research

- Book one 15-minute time slot to meet with me here, so we can discuss your potential research topic and team at Innovation for Peace and Development (IPD)

- Create a free Overleaf account

- Install Mendeley on your computer

- Download a copy of this LaTeX Cheat Sheet

Week 3: Variables and Hypothesis Testing (September 16)

Required Readings:

- Kellstedt, Paul, and Guy Whitten. 2018. *The Fundamentals of Political Science Research*. Third Edition. Chapter 1.

  – Skip: section 1.1

  – Skim: section 1.2-end of chapter

  – Study: concepts covered section at the end of the chapter

- Ferraz, Claudio, and Frederico Finan. 2008. "Exposing Corrupt Politicians: The Effects of Brazil's Publicly Released Audits on Electoral Outcomes." *Quarterly Journal of Economics* (123)2: 703-745.

  – Download this article from the UT-Austin Library website:

    ∗ Google "UT Austin Library", and then put the article title into the search bar.

  – Read: pages 703-706.

  – Optional: rest of article.

Required Homework Assignments:

- Based on the required reading assignment for the Ferraz and Finan (2008) article and what you learn from Kellstedt and Whitten (2018, Chapter 1), answer the following questions:

  1. What is the theory?

2. Is the theory causal?

3. What is the hypothesis?

4. What is the dependent variable at a high level of abstraction?

5. What is the dependent variable at a low level of abstraction?

6. What is/are the independent variable(s) at a high level of abstraction?

7. What is/are the independent variable(s) at a low level of abstraction?

Hint: If you are having trouble understanding what I mean by "high/low level of abstraction", refer to what Kellstedt and Whitten (2018, Chapter 1) call the higher-level "concept" and lower-level "measured" versions of the dependent and independent variables in Figure 1.2.

Students must submit their assignment in LaTeX. No exceptions. One or two sentences per question should suffice. Please turn in your assignment on Canvas at 11:59 p.m. on September 22. Because we will go over the answers in class, no late work will be accepted for this assignment.

Week 4: Descriptive and Causal Arguments; Excel [Part 1] (September 23)

IPD Workshop to Begin Class

- Excel (Part 1)

Visiting Faculty

- Faculty Visit 1: TBD

Required Readings:

- Gerring, John, and Dino Christenson. 2017. *Applied Social Science Methodology: An Introductory Guide.* Cambridge: Cambridge University Press.
    - Read: Chapter 2
    - Optional: Chapter 14

- Greene, Kenneth F. 2016. "A Primer on Writing Articles for Political Science Journals in the early 21st Century: Basic Organization of Articles with a Causal Argument" Unpublished Manuscript. University of Texas at Austin. [On Canvas]
    - Read: pages 1-2 (stop at "Sending it out"); AND page 4 (Section I, Introduction)

- Facutly 1 Paper
    - TBD

Required Assignments:

- Submit your introduction by September 29 at 11:59 p.m. on Canvas. Your introduction should be about 2-3 double-spaced pages with the following elements weaved into a coherent text—i.e., no lists:

  1. Question build-up or a hook, ending with the research question [1-2 paragraphs]

     – A good paper catches the reader's attention early, even if the reader is not normally interested in your topic. Don't go overboard here, though. A "hook" or factual anecdote—not something from your personal life—can be effective. For an excellent example of a "hook", see the first paragraph of Moussa's (2020) article on promoting social cohesion between Muslims and Jews in the Middle East through soccer.

     – Some mentions of literature can be helpful, but only if they are extremely interesting. For example, a UT graduate's paper on foreign aid allocation cites the past literature to start, but the only reason why the opening works is that it brings up something controversial and catches the reader's attention. Basically, don't bore your reader.

     – End with a question to guide the research.

  2. Why is the question important, and what gaps does it fill in the literature [1 paragraph]

     – Chapter 1 from King, Keohane, and Verba (1994), as well as chapters 1 and 12 from Gerring and Christenson (2017) are helpful here. Note: please do not use the word "important" here. Show; don't tell.

     – Note: you will need to have some sense of the past literature to make this part accurate and coherent. Don't worry, though: This/theses paragraph(s) will get better with each revision.

  3. Theory/Argument [1-2 paragraphs]

     – I find the graph on page 10 of Kellstedt and Whitten (2018) to be very helpful here. A theory has more than one level. Think of a Russian doll. At the end of the paragraph, state the lower-level hypothesis.

  4. Research Design:

     – You will need to revise this part significantly later, but try to write something for now. In particular, your research design will be feasible if you can find quantitative data to test your theory/argument. Accordingly, please look for and specify quantitative data for your dependent and independent variables at low levels of abstraction. You will revise this part later. [1 paragraph]

  5. Findings: Make it a placeholder for now. In other words, you can just have an empty paragraph with just "Findings (Placeholder)". [1 paragraph]

  6. Implications for Theory and/or Policy: Make it a placeholder for now [1 paragraph]

7. Paper structure [1 paragraph]

   – Start with: "This paper proceeds as follows. In Section 1, I....". Don't just use the section titles. Provide a little more detail.

Week 5: Concepts and Measures; Excel [Part 2] (September 30)

IPD Workshop to Begin Class

- Excel (Part 2)

Required Reading:

- Gerring, John, and Dino Christenson. 2017. *Applied Social Science Methodology: An Introductory Guide.* Cambridge: Cambridge University Press.

   – Read: Chapter 3.

- Greene, Kenneth F. 2016. "A Primer on Writing Articles for Political Science Journals in the early 21st Century: Basic Organization of Articles with a Causal Argument" Unpublished Manuscript. University of Texas at Austin.

   – Read only page 4 (Section II, Dependent Variable)

Optional Reading:

- Kellstedt, Paul, and Guy Whitten. 2018. *The Fundamentals of Political Science Research.* Third Edition. Chapter 5.

   – Note: if you are using the 2013 edition, it's Chapter 6.

Required Assignments:

- Start revising your introduction after receiving my corrections.

- Start writing the dependent variable section, using Greene (2016) and the detailed instructions on the syllabus (see next week, below) as your guide. You can leave out the graph until we have completed the introductory classes on `Excel` and `R`.

Extra Credit Assignment:

- UT Undergraduate Research Fellowship application: due to me via email on Friday, October 4 at 12 noon. Please write me an email *before* completing this assignment if you are interested. Because this deadline is coming early in the course (September 30), most research projects will not yet be at a stage in which it would make sense to apply for this fellowship. Some projects may be ready, but almost all projects will be ready by the second deadline in February. It may make sense to wait until then. If you receive my clearance to complete this assignment, I will read and give feedback on any applications right away so that students can meet the application deadline of October 4. A complete application entails a 4-page proposal with budget and recommendation letter (see above link). There are quite a few awards: in previous years, circa 50% of

applicants received an award. These awards can be up to $1,000, and many previous Practicum students have won these awards.

Week 6: Analyses and Samples; Causal Frameworks (October 7)

Required Reading:

- Gerring, John, and Dino Christenson. 2017. *Applied Social Science Methodology: An Introductory Guide.* Cambridge: Cambridge University Press.

  - Read: Chapters 4 and 5.

    * Spend less time on Chapter 5 than Chapter 4, but please do read Chapter 5.

Required Assignments:

- Start working on revising your introduction and dependent variable section, which is due next week.

- Install R and R Studio

Optional, Helpful Videos:

- Watch this Getting Started with R and R Studio video

  - This video help you get R and R Studio set up on your computer, which is a required assignment (see below)

Optional Assignment:

- Complete the free "Getting Started" Chapter from Data Camp's Intro to Spreadsheets course.

Week 7: Critiquing the Literature, and Leading with Your Voice to Distinguish Your Contribution; Intro to R [Part 1] (October 14)

R Training to Begin Class

- Intro to R (Part 1)

  - Danny's guide to how to think about R

  - Setting the working directory

  - Objects, vectors, entering in data manually, and creating data frames

  - Classes (mumeric, character, factors)

  - Dealing with missing values

  - Installing packages and loading libraries

  - Descriptive statistics (mean, median, mode, quantiles)

- Tables with `stargazer`

- Getting help

Required Reading:

- Greene, Kenneth F. 2016. "A Primer on Writing Articles for Political Science Journals in the early 21st Century: Basic Organization of Articles with a Causal Argument" Unpublished Manuscript. University of Texas at Austin.

  - Read only pages 4-5 (Section III, Critique existing arguments about your DV)

- Kellstedt, Paul, and Guy Whitten. 2018. *The Fundamentals of Political Science Research.* Third Edition.

  - Read only Section 2.6: "Using the Literature without Getting Buried in It" (Pages 38-41).

Required Assignments:

- Please update your IPD time-tracking Google Sheet by Friday, October 18 at 11:59 p.m.

- Submit your revised introduction and dependent variable section on Canvas by October 20 at 11:59 p.m., paying particular attention to the following:

  - A section heading/title that is NOT "Dependent Variable". The section heading should be your dependent variable at the highest level of abstraction. If you are curious about what I mean, refer to page 10 of Kellstedt and Whitten (2018).

    * For example, let's say that from an empirical perspective, I am studying bribery levels in the Russian judiciary. In such case, the dependent variable section should be titled "Corruption", because bribery is a form of corruption.

  - Defining and *conceptualizing* the dependent variable at the highest level of abstraction that is relevant for your paper

    * Let's say that you are arguing that natural resource income leads to civil conflict. In this case, your dependent variable is civil conflict, so you would start this dependent variables section by defining and explaining what is civil conflict. For example, what is the threshold number of battle deaths for a conflict to constitute a civil conflict? Is there a difference between civil war and civil conflict? Do different sources use different thresholds on what constitutes a civil war? How many countries have been affected by civil war? Answering such questions helps establish the importance of your topic without just saying that your topic is important.

  - Ensuring the reader understands your dependent variable at lower levels of abstraction, notably how *other* papers measure it.

    * To be crystal clear, the exposition of your dependent variable at a lower level of abstraction should NOT talk about the way you are measuring your lower-

level dependent variable, which belongs in your research design. Instead, this is about the different ways that *other* papers are measuring it. This whole exercise is about giving your reader an idea about the different ways to move from the high level of low level of abstraction.

      · To better understand, let's continue with the above example on natural resources and civil conflict. Here, the reader would like to know what types of behaviors are associated with civil conflict. For example, the Armed Conflict Location Event Data (ACLED) measures civil conflict by including protests. However, the Uppsala Conflict Data Program (UCDP) does not take protests into account and only focuses on conflicts where battle deaths excceed a certain threshold number, which is often 1,000. If studies using these different datasets are finding different things, talk about these studies.

  – No need to provide a graph yet, but please try to think about how you would score your cases. In other words, think about the variation in your dependent variable.

      ∗ Continuing with the above example on natural resources and civil conflict, think about cases that might help the reader understand civil conflict. Providing that such examples are relevant for your study, is there a difference between what happened in, say, Rwanda in 1994 and Northern Ireland from 1968-1998?

Optional, Helpful Videos:

- Watch this Getting Started with R and R Studio video

  – This video help you get R and R Studio set up on your computer, which is a required assignment (see below)

- Watch this Introduction to R video.

  – This video will also help you with the setup but goes a bit deeper as well.

Week 8: Causal Hypotheses and Analysis; Intro to R [Part 2] (October 21)

R Training to Begin Class:

- Intro to R (Part 2)

  – Histograms, bar plots, scatter plots in ggplot2

  – Correlations

  – Exporting graphs

  – Saving data

Faculty Visit 2: TBD:

- Faculty TBD

Required Reading:

- Gerring, John, and Dino Christenson. 2017. *Applied Social Science Methodology: An Introductory Guide.* Cambridge: Cambridge University Press.

    - Read: Chapter 6

- Faculty 2 Paper

    - TBD

Required Assignments:

- Please update your IPD time-tracking Google Sheet by Sunday at 11:59 p.m.

Optional Reading:

- Kellstedt, Paul, and Guy Whitten. 2018. *The Fundamentals of Political Science Research.* Third Edition. Chapter 3.

Week 9: Critique of a Working Paper (October 28)

Discuss Paper Critique:

- Walk through questions to ask

- Group discussion

- Class discussion

Team Discussion of Causal Threats:

- What's you mechanism?

- Reverse causation

- Confounding variables

Experimental Design:

- What is an experiment?

- What would the 'ideal' experiment for your project be?

- Design the perfect experiment and discuss

Required Reading:

- Choose from any <u>one</u> of the following working papers:

    - Denly, Michael. 2021. "Preventing the Negative Externalities of Development: Aid Compliance, State Capacity, and At-Risk Groups." Presented at the *American Political Science Association (APSA) Annual Conference.*

– Cowser, Danny. 2021. "Peacebuilding Castles in the Sky". See canvas link.

Required Assignments:

- Please update your IPD time-tracking Google Sheet by November 3 at 11:59 p.m.

- Use anything you learned in the course to find two substantive problems with one of the Working Papers. I will not accept critiques regarding typos or grammar. You can be provocative, but make sure that you support your argument with relevant facts and sources. Submissions are due by by November 3 at 11:59 p.m.

Week 10: Large-N Observational Designs (November 4)

Required Reading:

- Gerring, John, and Dino Christenson. 2017. *Applied Social Science Methodology: An Introductory Guide.* Cambridge: Cambridge University Press.

    – Read: Chapter 8.

- Greene, Kenneth F. 2016. "A Primer on Writing Articles for Political Science Journals in the early 21st Century: Basic Organization of Articles with a Causal Argument" Unpublished Manuscript. University of Texas at Austin.

    – Read only page 5 (Section IV, Your argument in detail)

Required Assignments:

- Please update your IPD time-tracking Google Sheet by November 10 at 11:59 p.m.

- Submit your updated introduction and dependent variable section along with your literature critique by November 10 at 11:59 p.m. The Greene (2016) reading assignment from last week provides a terrific road map for this assignment. In particular, remember to:

    – Lead with your own voice: please refrain from Author X says, Author Y says...

        * To lead with your own voice, ensure that you have a strong topic sentence in each paragraph, and also make sure that paragraph is not just a summary of one author's work. I will deduct points when paragraphs are merely just a review of one person's work. A strong literature critique uses others' work to develop their own argument, citing others along the way.

    – This is more of a *critique* than a *review*. I say this because a *review* is generally flat, uninteresting, and bores the reader.

    – Please do NOT mention the title of the article/book mid-sentence anywhere. No exceptions. Use parenthetical citations instead. For example, if I would like to cite a 2016 book written by Rachel Wellhausen in a sentence, I would put Wellhausen (2016). If I wanted to paraphrase an idea from Wellhausen (2016) and put it at the end of the sentence, which is almost always preferable, cite the book as (Wellhausen 2016).

– In total, between your dependent variable section and literature critique, you should have a total of at least 20 academic sources—i.e., books and academic articles. Websites and Wikipedia, etc., do not count toward your 20 sources. To be clear, sometime it is OK to cite a website or a news article from a reputable sources, but these are generally exceptions.

Reminder:

- If you have not already met with me twice, it would be advisable to book another 15-minute office hours slot before November 6. You do not want to lose 1 point toward your final grade for failing to fulfill this requirement.

Week 11: Case Study Designs (November 11)

Required Reading:

- Gerring, John, and Dino Christenson. 2017. *Applied Social Science Methodology: An Introductory Guide.* Cambridge: Cambridge University Press.

    – Read: Chapter 9.

Required Assignments:

- Please update your IPD time-tracking Google Sheet by Sunday at 11:59 p.m.

Further Reading (Not Required):

- Gerring, John, and Lee Cojocaru. 2016. "Selecting Cases for Intensive Analysis: A Diversity of Goals and Methods." *Sociological Methods and Research* 45(3): 392-423.

- Gerring, John. 2017. "Qualitative Methods." *Annual Review of Political Science* 20(1): 15-36.

Week 12: Diverse Tools of Causal Inference and Data Management (November 18)

Required Reading:

- Gerring, John, and Dino Christenson. 2017. *Applied Social Science Methodology: An Introductory Guide.* Cambridge: Cambridge University Press.

    – Read: Chapter 17.

    – Skim: Chapter 10.

- Greene, Kenneth F. 2016. "A Primer on Writing Articles for Political Science Journals in the early 21st Century: Basic Organization of Articles with a Causal Argument" Unpublished Manuscript. University of Texas at Austin.

    – Read only page 5 (Section V, Research Design)

Required Assignments:

- Please update your IPD time-tracking Google Sheet by Sunday at 11:59 p.m.

- Submit your revised introduction, dependent variable section, and literature critique along with your theory section by November 24 at at 11:59 p.m.. When evaluating your theory assignments, I will be looking for, *inter alia*, the following elements:

  - Ensure your theory/argument is clear at both high- and low-levels of abstraction. Trace the mechanisms of your argument so that the reader can understand exactly why your argument is credible. In other words, I am looking for your theory to have mechanisms (or sub-reasons). Recall the example of Russian dolls.

  - Clearly state your hypothesis *at the end(!)*, which should follow directly from your theory.

  - See all points in the Greene (2016) reading

Thanksgiving/No class (November 25)

Week 13: Univariate Statistics, Bivariate Statistics, and an Introduction to **R** (December 2)

IPD Workshop to Start Class:

- **R** training on V-Dem data

Required Reading:

- Gerring, John, and Dino Christenson. 2017. *Applied Social Science Methodology: An Introductory Guide*. Cambridge: Cambridge University Press.

  - Read: Chapters 18 and 21, and learn the terms listed at the end of the chapter.

Required Assignments:

- Please update your IPD time-tracking Google Sheet by Sunday at 11:59 p.m.

- Submit a 2-3 page referee report of another student's work (chosen by the instructor) on Canvas by December 5 at 11:59 p.m.. I would encourage you to look at the example referee reports on Canvas for further guidance, but your referee reports should definitely have the following elements:

  - In the first paragraph, summarize the author's theory and how he/she proposes to test his/her theory. (Referee reports *always* start with this one paragraph summary of the paper).

  - Discuss whether or not you found the theory and hypothesis compelling, and explain why or why not.

  - Discuss whether the research design adequately maps to the theory. In other words, talk about the operationalization. (Hint: Think about the diagram in Chapter 1 of Kellstedt and Whitten (2018) that links the theory to hypothesis.) Are the data put forth useful to test the hypothesis? Did the author choose the

best possible design to test his/her hypothesis? Why or why not? If another design would have been better, explicitly say so. However, please do not just propose another design without a lot of thought. In all likelihood, the author thought carefully about the particular design that he/she chose.

– If the author does not use an experiment or a design that attempts to mimic an experiment, did the author include relevant covariates? If not, which covariates are missing that would impact the outcome?

– See Appendix **??** of this syllabus for additional guiding questions that may be useful for assessing your colleague's study.

Resources for R (Not Required):

- Introduction to `ggplot2`

- Download some `R` Cheat Sheets

- An to Introduction `R` (A nice introductory manual)

- The Official `ggplot2` website

Week 14: Continued R Training (December 9)

Required Reading:

- None.

Class:

- R training

  – Review: Loading and saving data

  – Review: Inspecting data (browsing, tabulating, etc.)

  – Review: Creating new variables

  – Correlation

  – Difference in means

  – Review: Merging data

  – Review: Finding and removing duplicates

Required Assignments:

- Please update your IPD time-tracking Google Sheet by Sunday at 11:59 p.m.

- Submit your `R` assignment (both `R` script and PDF/Word Doc) on Canvas by December 15 at 11:59 p.m.. The homework will comprise the following sub-questions:

1. Dichotomize the V-Dem political corruption score variable (`v2x_corr`) into new numeric variables called `corrupt` and `not_corrupt` based on the mean value of `v2x_corr`. (Note: "dichotomize" means separate into binary—i.e., 0 or 1)

2. Create a new string variable called `regime_corrupt`, in which one value is "corrupt regime" if `corrupt== 1`; and the other value is "not corrupt regime" if `not_corrupt== 1`

3. Pick one variable of your choosing from the World Bank's World Development Indicators (WDI) that you think is correlated with corruption, and explain in words why you think that variable is correlated with corruption.

4. Merge the WDI variable into the V-Dem dataset

5. Subset the data to only keep the data from the year 2016.

6. Test if the WDI variable that you chose is correlated with the the V-Dem political corruption score variable (`v2x_corr`), by showing (a) a pairwise correlation table; and (b) a labeled scatter plot. Explain in words what your table and scatterplot suggest.

7. Create a crosstab with your WDI variable and the `regime_corrupt` variable that you created above. Explain in words what your crosstab suggests in terms of how your variable varies in corrupt and non-corrupt regimes.

8. Using your WDI variable, test if there is a statistically significant difference between corrupt regimes and non corrupt regimes (hint: use difference in means test)

9. Please submit both your commented R script and PDF showing your results. To be clear, I don't just want your code; I would like to see the graphs and tables that your code generates as well as some accompanying text. I provided you the code to produce LaTeX tables, and you also still have the LaTeX Training Overleaf. However, if you are short on time, you can also just paste in screen shots for this homework assignment—though please don't paste in screen shots in your final paper.

Final Research Design Due Date: December 16 at 12 noon

- Because the registrar has very tight deadlines for instructor grade submissions, I unfortunately will not be able to accept any late papers—beyond a 15-minute grace period to account for technical issues at submission, etc.

- Submit your revised introduction, dependent variable section, literature critique, and theory along with your research design by Monday, December 16 at 12 noon. When examining your research design, I will be looking, *inter alia*, for the following elements:

  - The mention of credible, well-measured data that clearly map to the hypothesis, and a clear description of these data and their source. Again, think about the diagram on page 10 of Kellstedt and Whitten (2018).

- The mentioning of data that you will use for your dependent and independent variables but also for your control variables

- The method will you be using to test your hypothesis, and a clear justification of why that method is appropriate

- See all points in the Greene reading