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Applied Research Methods I

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Course Information
Abbreviation: GOV355C
Unique Number: 37575
Time: Friday 1-4pm
Room: GAR 3.116
Flags: Writing, Independent Inquiry
Website: canvas.utexas.edu

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Research Lab Information
Innovations for Peace and Development
Lab Location: BEL (Stadium) 214
Lab Access Code: Ask the instructor
Website: www.ipdutexas.org

1. Course Description

This course is the first semester of a two-semester program that attempts to provide undergraduate students with a fairly comprehensive introduction to the research process in the social sciences. As part of this program, students will attend regular classes, write their own first-rate 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 will cover 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 increasingly helpful for success in the social sciences, the course will also provide training in `Stata`, `R`, LaTeX, `Mendeley`, and `ArcGIS`. At the end of the first semester, students will hand-in their own well-developed Research Proposals in lieu of a final exam.

During the second semester, classroom instruction will cover 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, logistic regression, and network analysis. Training in the above software programs will continue during the second semester as well. At the end of the second semester, students will complete their own research projects, write-up their results in a formal paper, and

present their findings to the class.

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. Students with previous coursework in political science, economics, sociology, and/or statistics will likely find the course easier.

2.2.   Required Software

This course makes use of Stata, R, LaTeX, Mendeley, and ArcGIS. Prior knowledge of any of these software programs is not required. I 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 <u>never</u> be necessary to construct your own bibliography manually ever again.

- Stata. Although Stata is a relatively expensive commercial software, as a UT student you have free access to Stata through the UT Austin Stats Apps Server as well as numerous computer labs on campus. The IPD lab (BEL [Stadium] 214), which you have access to as part of this class, has Stata as well.

- 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. As with Stata, 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:

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

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

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 webpage, 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, 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 on-time. Even if students miss both 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, since 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. Since 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 (and Extra Credit)

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 Friday at 12 noon 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 resumés, curriculum vitae, etc.

Most weeks, IPD will also offer workshops in programs such as `Excel`, `Stata`, R, `ArcGIS`, etc. On many occasions, I will offer these workshops, and integrate them with our course. For each workshop that students attend *outside of our normal class time*, students will receive 0.33 points toward their final grade. To receive this credit, students will need to sign-in each time with the IPD Task Team Leader offering the workshop. I will then obtain a list of students who attended this workshop directly from the respective IPD Task Team Leader.

2.6.　Office Hours and Meetings with the Instructor

Students must meet with me at least two times during the semester before November 9. During the first required meeting, we will discuss IPD team choice and potential research projects. During the second meeting, we will discuss progress on the research project. In case students have a work or class commitment, I will be happy to meet with them outside my designated office hours. To obviate having to wait in long lines, students may book an office hours slot here. Students who do not meet with me at least twice before November 9 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, including `Stata` and R 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 Proposal, 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, 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 produce a Research Proposal, which they will expand upon during the second semester to make a full, first-rate Research Paper. The first-semester Research Proposal will contain the following elements:

1. An introduction to a puzzle in an academic literature of the student's choosing

2. A clear description of the dependent variable

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

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

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

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

To ensure students are progressing toward completing their research proposals by the end of the semester, students will need to submit the following sub-assignments:

1. an introduction [circa 2-3 double-spaced pages, due September 20]

2. a description of the dependent variable (with a revised introduction) [circa 5 doubled-spaced pages in total, due October 4]

3. a literature critique (with a revised introduction and DV section) [circa 7-8 double-spaced pages in total, due October 18]

4. a theory (with a revised intro, DV section, and lit critique) [circa 9-12 double-spaced pages, due November 1]

5. a research design (with a revised intro, DV section, lit critique, and theory section) [circa 13-16 pages double-spaced, due November 15]

For each of these sub-assignments, students 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, students will respectfully provide 2.5-3 double-spaced pages of feedback on another student's research design. 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, students will submit a final Research Proposal. The final Research Proposal should incorporate feedback from all the previous assignments and the student Referee Report as well as include a bibliography made with `Mendeley` or another program. The final Research Proposal will comprise 15% of students' final grades and will be due on December 16 at 12 noon.

As with the sub-assignments, the Research Proposal also presents an opportunity for extra credit: students who write their paper in LaTeX will receive an two extra points toward their final grade on the Research Proposal. 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.

3.   Policies

3.1.   Grading Rubric

- Referee Report: 5%
- Attendance: 5%
- Class Participation: 5%
- Quizzes: 10%
- Introduction Sub-Assignment: 5%
- Dependent Variable Section Sub-Assignment: 5%
- Literature Review Sub-Assignment: 5%
- Theory Sub-Assignment: 10%
- Research Design Sub-Assignment: 5%
- Homework, including `Stata`/`R` Assignments: 15%
- Final Research Proposal: 15%
- IPD Internship Evaluation: 15%

- Extra Credit: IPD Workshops: 0.33 potential points toward students' final grades for each workshop attended *outside of classtime.*

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

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

- Potential Penalty: Instructor Meetings: 1 potential point for not meeting with the instructor twice before November 9.

3.2. Grading Scale

- 92.50-100 (A)
- 92.49-89.50 (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-)
- 59.49 or below (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 paper. 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.   Quantitative Papers Only

Although this course covers some qualitative research, the focus of the course is quantitative. Accordingly, students must write a quantitatively-oriented or mixed methods paper for their Final Research Proposal.

3.7.   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 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 appropriate source. Since 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.   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 (with a doctor's note or email before class required), extenuating circumstances due to an emergency, and university-excused absences (with a note from respective faculty member or staff).

3.10.   Late Work

Unless you receive prior approval from me, I will not accept late final Research Proposals, 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: -25%

- more than 2 days late: -50%

- more than one week: -75%

- more than two weeks: no credit offered

3.11.   Homework Policies, Including for Stata/R Assignments

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, R help forums, and Stata help forums. Additionally, students may not seek help from people outside the class, such as from a friend, professor, PhD student, etc. Students who received any sort of prohibited outside help will receive a zero for that particular assignment. These policies are in place because the only way to become proficient in these programs is to actually use them and make mistakes until you get it right.

If you need help with a particular question, feel free to book an office hours slot. 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.   Use of Computers During Class

To start the course, I will let everyone take notes in the manner that them suits them best. However, if students are consistently surfing the internet during class and/or not paying sufficient attention to class discussion, I reserve the right to alter this policy and ban the use of computers.

3.13.   Students Rights and Responsibilities

- You have a right to a learning environment that supports mental and physical wellness.

- You have a right to respect.

- You have a right to be assessed and graded fairly.

- You have a right to freedom of opinion and expression.

- You have a right to privacy and confidentiality.

- You have a right to meaningful and equal participation, to self-organize groups to improve your learning environment.

- You have a right to learn in an environment that is welcoming to all people. No student shall be isolated, excluded or diminished in any way.

With these rights come these responsibilities:

- You are responsible for taking care of yourself, managing your time, and communicating with the instructor if things start to feel out of control or overwhelming.

- You are responsible for acting in a way that is worthy of respect and always respectful of others.

3.14.   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.

3.15.   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: http://deanofstudents.utexas.edu/sjs/acint_student.php

3.16.   Drop Policy

If you want to drop a class after the 12th class day, you'll need to execute a Q drop before the Q-drop deadline, which typically occurs near the middle of the semester. Under Texas law, you are only allowed six Q drops while you are in college at any public Texas institution. For more information, see: http://www.utexas.edu/ugs/csacc/academic/adddrop/qdrop

3.17.   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:

3.17.1.   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/

3.17.2.   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

3.17.3.   The Sanger Learning Center

Did you know that more than one-third of UT undergraduate students use the Sanger Learning Center each year to improve their academic performance? All students are welcome to take advantage of Sanger Center's 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).

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

3.17.4.   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, http://www.utexas.edu/safety/):

- 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: www.utexas.edu/emergency

4.   Class Schedule, Readings, and Homework

Week 1: What Is Social Science, and What Are the Elements of a Good Research Design? (August 30)

Required Readings:

- Carefully read the course syllabus

- King, Gary, Robert Keohane and Sidney Verba. 1994. *Designing Social Inquiry: Scientific Inference in Qualitative Research.* Princeton: Princeton University Press. Chapter 1. [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. Chapter 1.

    – Read the whole chapter. It is a very nice introduction to what is social science, and complements King, Keohane, and Verba (1994) very well.

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

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

Recommended, but Not Required, Reading:

- Gerring, John, and Dino Christenson. 2017. *Applied Social Science Methodology: An Introductory Guide.* Cambridge: Cambridge University Press. Chapter 12.

    – I would recommend that you read this chapter quickly or skim it. The chapter will help you in your search for a topic of your Research Proposal.

Week 2: Reference Management and Writing in Plain Text/LATEX (September 6)

Required Reading and Video:

- Read A Short Introduction to LaTeX

- Watch this Getting Started with Mendeley video

Required Assignments:

- Start thinking about a topic for your research proposal

- 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

Recommended, but not Required, Assignment:

- Install LaTeX on your computer (See Section 2.2. of this syllabus)

Further Reading (Not Required):

- Learn LaTeX in 30 Minutes

- A Not So Short Introduction to LaTeX

Week 3: Variables and Hypothesis Testing (September 13)

Required Readings:

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

  - Skip: section 1.1

  - Read throughly: 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 the library webpage, and then put the article title into the UT-Austin library search bar.)

  - Read: pages 703-706.

  - Optional: rest of article.

Required Homework Assignments:

- Based on the required reading assignment for the Ferraz and Finan article, 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?

5. What is/are the independent variable(s)?

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 12 noon on Friday, September 14. Since we will go over the answers in class, no late work will be accepted for this assignment.

Week 4: Descriptive and Causal Arguments; Introductory Excel [Part 1] (September 20)

IPD Workshop to Begin Class

- Part 1 of Introductory Microsoft Excel

Required Readings:

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

  - Read the whole chapter and learn/know the key terms, listed at the end of the chapter.

- 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: pages 1-2 (stop at "Sending it out"); AND page 4 (Section I, Introduction)

Required Reading to Review:

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

  - This chapter was previously assigned during the first week. I am suggesting that you review it (and the corresponding slides) here again because it will help give you ideas for your required assignment (below).

Recommended, Non-Required Reading:

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

Required Assignments:

- Please update your IPD time-tracking Google Sheet by Friday, September 20 at 12 noon

- Submit your introduction by September 21 at 12 noon on Canvas. Your introduction should be about 2 double-spaced pages with the following elements weaved into a coherent text (i.e., no lists):

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

    * 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.

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

    * Appendix A of this syllabus, 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.

  - 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 hypothesis.

  - Research Design: You will need to revise this significantly later, but try to write something for now [1 paragraph]

  - Findings: Make it a placeholder for now [1 paragraph]

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

  - 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; Introductory Excel [Part 2] (September 27)

IPD Workshop to Begin Class

- Part 2 of Introductory Microsoft Excel

Required Reading:

- Gerring, John, and Dino Christenson. 2017. *Applied Social Science Methodology: An Introductory Guide*. Cambridge: Cambridge University Press. Chapter 3.

– Read the whole chapter and learn/know the key terms, listed at the end of the chapter.

- 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:

- Please update your IPD time-tracking Google Sheet by Friday, September 27 at 12 noon.

- Start revising your introduction after receiving my corrections.

- Start writing the dependent variable section, using Greene (2016) as your guide. You can leave out the graph until we have completed the introductory classes on Stata and R.

Extra Credit Assignment:

- UT Undergraduate Research Fellowship application: due on Canvas Friday, September 1 at 12 noon. Please write me an email before completing this assignment if you are interested. Since this deadline is coming early in the course, 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 September 30. A complete application entails a 4-page proposal with budget and recommendation letter (see above link). There are quite a few awards: last year, circa 50% of applicants received an award. These awards can be up to $1000.

Week 6: Analyses and Samples; Advanced Excel [Part 1] (October 4)

IPD Workshop to Begin Class

- Part 1 of Advanced Microsoft Excel

Required Reading:

- Gerring, John, and Dino Christenson. 2017. *Applied Social Science Methodology: An Introductory Guide.* Cambridge: Cambridge University Press. Chapter 4.

  – Read the whole chapter and learn/know the key terms, listed at the end of the chapter.

Required Assignments:

- Please update your IPD time-tracking Google Sheet by Friday, October 4 at 12 noon

- Submit your revised introduction and dependent variable section on Canvas by October 5 at 12 noon, paying particular attention to the following:

  – 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 as well—how you measure it.

    * Continuing with the above example on natural resources and civil conflict, what types of behaviors are associated with civil conflict, or is it only about battle deaths?

  – 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?

Week 7: Causal Frameworks, Critiquing the Literature, and Leading with Your Voice to Distinguish Your Contribution; Advanced Excel [Part 2] (October 11)

IPD Workshop to Begin Class

- Part 2 of Advanced Microsoft Excel

Required Reading:

- Gerring, John, and Dino Christenson. 2017. *Applied Social Science Methodology: An Introductory Guide.* Cambridge: Cambridge University Press. Chapter 5.

    – Read the whole chapter and learn/know the key terms, listed at the end of the chapter.

- 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 11 at 12 noon

- Start revising your introduction and dependent variable sections after receiving my corrections.

- Start writing the literature critique section, using the Ken Greene document as your guide.

Week 8: Causal Hypotheses and Analysis; Intro to Spatial Data (October 18)

IPD Workshop to Begin Class

- Introduction to `ArcGIS`

Required Reading:

- Gerring, John, and Dino Christenson. 2017. *Applied Social Science Methodology: An Introductory Guide.* Cambridge: Cambridge University Press. Chapter 6.

    – Read the whole chapter and learn/know the key terms, listed at the end of the chapter.

Required Assignments:

- Please update your IPD time-tracking Google Sheet by Friday, October 18 at 12 noon

- Submit your updated introduction and dependent variable section along with your literature critique by Friday, October 18 at 12 noon. The Greene (2016) reading assignment from last week provides a terrific roadmap for this assignment. In particular, remember to:

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

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

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 25)

Required Reading:

- Denly, Michael, and Joelean Hall. 2019. "Subnational Public Goods Provision from Natural Resource Income: Evidence from Two New Datasets." Unpublished Manuscript.

Required Assignments:

- Please update your IPD time-tracking Google Sheet by Friday, October 25 at 12 noon

- Use the Appendix A of this Syllabus or anything else you learned in the course (but please reference a page number from the readings or specific slide number from a specific class) to find two substantive problems with the assigned Working Paper. I will not accept critiques regarding typos or grammar. Submissions are due by Friday, October 26 at 12 noon.

- Please update your IPD time-tracking Google Sheet by Friday at 12 noon.

- Start revising your introduction, dependent variable section, and literature critique after receiving my feedback.

- Start writing your theory section.

Week 10: Large-N Observational Designs (November 1)

Required Reading:

- Gerring, John, and Dino Christenson. 2017. *Applied Social Science Methodology: An Introductory Guide*. Cambridge: Cambridge University Press. Chapter 8.

  - Read the whole chapter and learn/know the key terms, listed at the end of the chapter.

- 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 Friday, November 1 at 12 noon

- Submit your revised introduction, dependent variable section, and literature critique along with your theory section by November 1 at 12 noon. 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, which should follow directly from your theory.

    – See all points in Greene (2016)

Reminder:

- If you have not already met with me twice, it would be advisable to book another 15-minute office hours slot before November 9. You do not want to lose 1 point toward your final grade for failing to fulfill this requirement.

Optional Reading (Not Required):

- Gerring, John, and Dino Christenson. 2017. *Applied Social Science Methodology: An Introductory Guide*. Cambridge: Cambridge University Press. Chapter 7.

    – This chapter on experimental designs will be assigned during the second semester of the course. I don't expect many students to be writing research proposals involving experimental designs, because carrying out an experiment can be quite complicated. However, some students may be interested in an experiment. If so, they should read this chapter and consult with me on next steps.

- Kellstedt, Paul, and Guy Whitten. 2018. *The Fundamentals of Political Science Research* Third Edition. Chapter 2.

Week 11: Case Study Designs (November 8)

Required Reading:

- Gerring, John, and Dino Christenson. 2017. *Applied Social Science Methodology: An Introductory Guide*. Cambridge: Cambridge University Press. Chapter 9.

– Read the whole chapter and learn/know the key terms, listed at the end of the chapter.

Required Assignments:

- Please update your IPD time-tracking Google Sheet by Friday, November 8 at 12 noon

- Start revising your revised introduction, dependent variable section, literature critique, and theory section.

- Start writing your research design.

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 15)

Required Reading:

- Gerring, John, and Dino Christenson. 2017. *Applied Social Science Methodology: An Introductory Guide.* Cambridge: Cambridge University Press. Chapter 10.

  – Read the whole chapter and learn/know the key terms, listed at the end of the chapter.

- Gerring, John, and Dino Christenson. 2017. *Applied Social Science Methodology: An Introductory Guide.* Cambridge: Cambridge University Press. Chapter 17.

  – Read the whole chapter and learn/know the key terms, listed at the end of the chapter.

- 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 Friday, November 15 at 12 noon

- Please submit two questions on Canvas that you would like to ask Professor John Gerring when he visits our class this Friday

- Submit your revised introduction, dependent variable section, literature critique, and theory along with your research design on Canvas by Friday, November 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

  – The mentioning of data that you will use for control variables (if a quantitative study)

  – The type of case that you will be undertaking, referencing Gerring and Cojocaru (2016) (if a case study)

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

  – See all points in Greene (2016)

Week 13: Univariate Statistics, Bivariate Statistics, and an Introduction to **R** and **ggplot2** (November 22)

Required Watching and Reading:

- 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.

- Gerring, John, and Dino Christenson. 2017. *Applied Social Science Methodology: An Introductory Guide.* Cambridge: Cambridge University Press. Chapter 18.

  – Read the whole chapter and learn/know the key terms, listed at the end of the chapter.

- Gerring, John, and Dino Christenson. 2017. *Applied Social Science Methodology: An Introductory Guide.* Cambridge: Cambridge University Press. Chapter 21.

  – Read the whole chapter and learn/know the key terms, listed at the end of the chapter.

- Download some R Cheat Sheets

Further Reading (Not Required):

- Introduction to ggplot2

- An to Introduction R (A nice introductory manual)

- The Official `ggplot2` website

Required Assignments:

- Please update your IPD time-tracking Google Sheet by Friday, November 22 at 12 noon

- Install R and `R Studio` on your computer and bring it to class

    - See assigned videos or Section 2.2. of this syllabus for instructions

- Submit a 2-3 page referee report of another student's work (chosen by the instructor) on Canvas by Friday, November 22 at 12 noon. 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 A of this syllabus for additional guiding questions that may be useful for assessing your colleague's study.

Week 14: No class due to Thanksgiving (November 29)

Week 15: Introduction to **Stata** (December 6)

Required Reading/Video:

- A Tour of the Stata 15 Interface

    - This is a 3-minute video and will be covered on the quiz.

Required Assignments:

- Please update your IPD time-tracking Google Sheet by Friday, December 6 at 12 noon

- Get the UT Austin Stats Apps Server setup for your computer so that you can use `Stata` for ou training.

- Submit your `R` assignment (both `R` script and PDF/Word Doc) on Canvas by Friday, December 6 at 12 noon. 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 Proposal Due Date: December 16 at 12 noon

- Since 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. That is, if you are late beyond 15 minutes, I will have no choice but to give you a zero. I would thus kindly ask that you submit your paper on-time and not put me in a really tough situation. I really want everyone to do well in the course.

- Make sure your final paper includes:
  - A fully revised introduction, dependent variable section, literature critique, theory section, and research design that takes into account feedback from the instructor as well as that of the referee report.

  - A labeled graph using `ggplot2` with R, added to the dependent variable section of the paper. This graph will show how you "score your cases".

  - A conclusion, indicating (a) what you need to do in the next semester to finish your paper; and (b) the expected contributions of your paper.

  - An abstract at the beginning of the paper. Please include the abstract on the same page as the title. The abstract should have the following:
    * 1 sentence on why your topic is important, ensuring that you "show" without "telling" the reader, and definitely do not use the word "important"
    * 1-2 sentences on your argument
    * 1-2 sentences on how you test your argument, including justification of your case/data, if necessary
    * 1 sentence stating the expected policy and/or theoretical contribution of your paper.

Appendix A   Questions to Consider for Proposals

A.1   All Studies

1. Does the study answer an important question to the world, and does the author justify its importance with a factual argument—as opposed to justifying the topic in overtly normative terms?

2. Does the study contribute to a scholarly literature, and does the author demonstrate sufficient knowledge of that literature to critique it and add to it?

3. Does the study abide by the rules of (descriptive or causal) inference—and contain public procedures, uncertainty estimates, a disinterested posture toward the truth, attention to possible error, and scope conditions?

4. Is the author clear and consistent about the type of relationships, theory, and objectives of the research?

5. Is the writing clear, does the author avoid the passive voice and colloquial language, and are there any grammar issues?

A.2   Quantitative Studies

1. Is the dependent variable in its concept form clear to the reader?

2. Is the principal independent variable in its concept form clear to the reader?

3. Are there cleanly measured, credible data available that clearly map to the dependent variable and independent variable in their concept forms?

4. Is there a falsifiable theory that is formulated at a high level of abstraction?

5. Is there a clear hypothesis that is formulated at a lower level of abstraction than the theory?

6. Does the hypothesis clearly map onto the theory?

7. Is the argument coherent and credible?

8. Are the research design and data appropriate for the research question, theory, and hypothesis?

A.3   Mixed Methods Studies with Qualitative Components

All Mixed Method Studies:

1. Does the author use integration of the quantitative and qualitative methods appropriately, and avoid triangulating methods for purposes for which they are ill-suited?

2. Does the author answer the questions (above) that pertain to the elements of the quantitative and qualitative research that are relevant to her/his study?

Case Studies:

1. Is/are the type(s) of case studies appropriate given the research question?

2. Does the author provide a clear and compelling justification for the selection of the case(s) being examined?

3. Is the detective work for the case study complete enough to sufficiently answer the research question?

Conceptualization Pieces:

1. Does the author have a clear grasp of the semantic field—that is, does she/he identify like terms and appropriately distinguish them from the concept of interest?

2. Is the author clear about the domain of his/her concept, and appropriately classify it as experience-near (i.e. relative to a particular area) or experience-distant (i.e. universal, positivist)?

3. Does the author choose the appropriate conceptualization strategy—that is, does she/he pay appropriate attention to the abstraction of the concept, avoid conceptual stretching, specifically state the intension and extension, and justify why couching the concept in terms of cumulation, a radial concept, re-definition or family resemblance is appropriate?

Interviews:

1. Does the author select subjects who can speak to the author's research question, and is there a clear, compelling, and ethical selection criteria for subject inclusion/exclusion?

2. Does the author seek out subjects who can provide a diverse range of perspectives on the research question at hand?

3. Does the author provide details about how he/she found the subjects, whether they received compensation, and locations/conditions of the interviews?

4. Does the author ask subjects appropriate questions that map to the research question of interest?

5. Are the answers from the subjects compelling enough to answer the research question definitively?

Focus Groups:

1. All of the above questions for interviews are relevant for focus groups as well.

2. Does the author make a concerted effort to ensure that dominant people in the room do not monopolize the discussion, and that more shy people are able to contribute to the discussion?

Ethnographies:

1. Does the author provide a compelling justification for why the ethnography she/he undertakes is relevant to the research question of interest?

2. Does the author have the training and capacity (e.g. language abilities, skills) to be able to credibly undertake the ethnography?

3. Is the author's role in the ethnography distracting to the extent that it alters the behavior of the actors under study, and does the author provide a compelling justification for why his/her role is not distracting?

4. Does the author make specific reference to the ethics of the ethnography, and are there any ethical concerns regarding the author's presence?

5. Is the author's attention to method (e.g. keeping daily field notes, minimizing distraction) apparent to the reader?