Course Description

The primary purpose of this course is to introduce students to the methods and terminology used by social scientists. We will examine basic concepts used in research (such as theories, hypotheses, independent and dependent variables, reliability and validity, and sampling). We will also examine basic statistical techniques that are used to examine data, with an emphasis on interpreting the results (ranging from descriptive statistics to crosstabs, correlation, and regression). Upon completion of this course, students should be able to understand and interpret most research published in political science journals, as well as public opinion polls, surveys, and research findings reported in the news. As a result, students who complete this course should be prepared for future coursework in the social sciences, for starting to pursue their own research, and for a life as an educated and informed citizen.

Students are expected to finish the course readings before the class period for which they are assigned, attend class regularly (showing up to class on time and staying through the end), and participate actively in class discussion where relevant. The course will be graded using three examinations (two midterms and a final), five homework assignments (several of which will require the use of SPSS statistical software), and 6-10 in-class exercises or quizzes.

Required Texts

• **Book:** This should be available at the usual Denton locations, or maybe cheaper through online bookstores -- but wherever you buy it, be sure to get the correct edition!
  

• **Canvas:** The remaining readings are available online through the Canvas page for this course, which you can access by using your EUID to log in at <https://unt.instructure.com>. It would be smart to print or save these readings early in the semester, because Internet connections disappear at inconvenient times (like the night before a quiz or an exam).

• **SPSS or PSPP software:** Some of the homework assignments toward the end of the semester will require the use of SPSS statistical software, which is installed in many UNT computer labs. If you are interested in getting your own copy of SPSS rather than depending on computer labs, you may order it through UNT at a substantial student discount. You will need the "SPSS Statistics Standard" version of the SPSS Grad Pack, which is available for both Mac and Windows at a cost of $58.99 (6 month rental) or $86.99 (12 month rental) at the following site:
  <https://untsystem.onthehub.com/WebStore/ProductsByMajorVersionList.aspx>

There is also a free statistical package called PSPP that is claimed to be very similar to SPSS: "it behaves as experienced SPSS users would expect, and their system files and syntax files can be used in PSPP with little or no modification, and will produce similar results (the actual numbers should be identical)". Students are welcome to use this if they would like to avoid paying for their own SPSS
license or having to go to a campus computing lab, although future employers may prefer to hire people with experience using the actual SPSS package, and some of the more advanced statistical techniques discussed at the end of the class are not currently implemented in PSPP (although PSPP should work just as well as SPSS for the techniques used in course homework assignments). This may be downloaded freely for Mac, Windows, and Linux platforms:
<https://www.gnu.org/software/pspp/get.html>

**Course Requirements**

1. **Examinations:** Three (noncumulative) exams are required. The exams will involve a mixture of questions to measure understanding of the wide variety of material covered in this course, including some multiple choice and some short answer (some requiring the interpretation of results and others requiring calculations). Each exam will be worth 20% of the total course grade.

2. **Homework Assignments:** There is no better way to learn concepts than through hands-on experience. There will be five (5) homework assignments, which will each be handed out one week before the due date. Together, these assignments will be worth 20% of the total course grade; each student's lowest homework grade will be dropped.

3. **Class Preparation, Attendance, and Participation:** An important part of a course like this is making sure that students understand the concepts as the semester is moving along. The best way to do this is to attend class regularly, having done the assigned readings beforehand (trying to cram a month's worth of reading, or xeroxing a classmate's notes from the entire semester, a few days before an exam is rarely a good strategy). Students are expected to prepare for class by doing the assigned readings and thinking about the assigned discussion topics as described in the syllabus before class, and to attend class regularly.

   Attendance, preparation, and participation will be measured with approximately 6-10 (unannounced) in-class activities or assignments, which may range from class surveys to group activities. Together, these assignments will be worth 20% of the total course grade; each student's lowest assignment grade will be dropped.

**Course Rules**

1. Makeup exams, whether for full credit or not, can take place only on UNT's designated "Reading Day" at the end of the last week of classes. Only one time slot on Reading Day will be offered for all makeup exams in any of the instructor's courses; students seeking to take a makeup exam in this time slot must contact the instructor no later than 5 PM on Tuesday of the last week of classes. Makeup exams in classes that usually use multiple choice tests will be offered as short answer/essay examinations (regardless of the type of exam that is being made up) over the same material that would have been covered by the original exam.

   Full-credit makeup examinations are given only with prior instructor approval (if at all possible) and with appropriate documentation. Note that the documentation must indicate why you could not be in class at the exact time of the originally scheduled test. If appropriate documentation is not provided, the makeup examination can still be taken, but will face a grade penalty of five letter grades, equivalent to showing up late at the original exam after one or more students have already finished and left the room. Makeup exams (whether full or reduced credit) are only available for students who missed the original exam; this is not an option for trying to retake an exam to get a higher score.

2. The scheduled final exam time represents the conclusion of the course. No late assignments or documentation will be accepted after the conclusion of this two-hour period, and no makeup exams will
be offered after this time.

(3) Students must keep an extra copy of each assignment until the instructor has returned the graded copy of that assignment. Students must also keep graded, returned copies of all assignments. Failure to do so will invalidate any potential question or protest about grades.

Also, students are responsible for maintaining backups of any written work for this course, preferably in a location away from the main computer that is being used (such as online backup through Dropbox). No extensions will be granted for work that is not turned in on time because of computer, hard drive, or printer failure, theft, power surge, or similar causes.

(4) All students must treat the instructor, the other students, and the classroom setting with respect. This includes arriving on time and staying for the entire class (or notifying the instructor in advance if this will not be possible), turning off cell phones and similar devices during class, and refraining from reading, passing notes, talking with friends, and any other potentially disruptive activities. This also means showing respect for alternative opinions and points of view, listening when either the instructor or a fellow student is speaking to the class, and refraining from insulting language and gestures.

Following departmental policy, any student engaging in unacceptable behavior may be directed to leave the classroom. Additionally, the instructor may refer the student to the Center for Student Rights and Responsibilities to consider whether the student's conduct violated UNT's Code of Student Conduct (which may be found at <http://deanofstudents.unt.edu/conduct>).

(5) The instructor's lecture notes and PowerPoint slides will not be posted online or otherwise handed out to students under any circumstances. If you are unable to attend one or more class meetings, make arrangements with another student to borrow or copy their notes.

Also be aware that any PowerPoint slides presented to the class will not contain all material that will be necessary for an "A" grade on course exams. The instructor's verbal lecture will also include important information that is not presented directly on the slides, so students should be careful to take notes on verbal lecture material as well as the brief overviews presented on the slides.

(6) Failure to abide by these policies will be dealt with in an appropriate manner, which may include a reduction in the course grade. Any exceptions are given at the instructor's discretion, only with prior approval where possible, and only with appropriate documentation.

Before asking for an exception, be aware that I will not grant exceptions that might be perceived as giving one student an unfair advantage or an opportunity that was not available to the remaining students who followed the rules correctly, turned in their work on time, and so on.

(7) The instructor's teaching-related policies and expectations are described in more detail at <http://www.paulhensel.org/teachgrade.html>. Failure to visit that web site does not constitute a valid excuse for ignorance of these policies. In particular, note that I do not "round up" grades -- an 89.9 counts as a B rather than an A -- and the only extra credit opportunity will be offered in class on the last class period before Thanksgiving (for fall semesters) or spring break (for spring semesters).

(8) Consistent with UNT rules, instructors (whether professors, teaching fellows, or teaching assistants) may not discuss student grades over email, telephone, or in any other setting that is not face-to-face due to privacy and security concerns. If you have questions about your grades, you may meet with me during office hours, or I will be glad to make an appointment at a more convenient time.
I will never cancel class on my own for weather-related reasons; unless you hear official word through UNT's Eagle Alert service, class will be held at the regular time and place. Students who are unable to make it to class due to weather are still responsible for any material covered in lecture that day. If class is canceled, the next class meeting after school resumes will cover the material that would have been covered in the canceled class meeting, and a revised syllabus will be posted as soon as practical to adjust the schedule of remaining class meetings. More detail on the instructor's weather-related policies is provided at <http://www.paulhensel.org/teaching.html>.

The content of this syllabus may be modified by the instructor at any time during the semester if deemed necessary. Any such changes will be announced in class as well as via Canvas's class email list; students are responsible for making sure that they check the email account that is on file with Canvas.

### Academic Integrity

Academic integrity is defined in the UNT Policy on Student Standards for Academic Integrity, which is located at: <http://policy.unt.edu/policy/06-003>. This includes such issues as cheating (including use of unauthorized materials or other assistance on course assignments or examinations), plagiarism (whether intentional or negligent), forgery, fabrication, facilitating academic dishonesty, and sabotage. All students should review the policy carefully; failure to read or understand the policy does not protect you from sanctions for violating it.

Any suspected case of academic dishonesty will be handled in accordance with current University policy and procedures. Possible academic penalties range from a verbal or written admonition to a grade of “F” in the course; further sanctions may apply to incidents involving major violations. You will find the policy and procedures at <http://facultysuccess.unt.edu/academic-integrity>.

### Americans with Disabilities Act

The University of North Texas makes reasonable academic accommodation for students with disabilities. Students seeking reasonable accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide you with a reasonable accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request reasonable accommodations at any time, however, ODA notices of reasonable accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of reasonable accommodation for every semester and must meet with each faculty member prior to implementation in each class. Students are strongly encouraged to deliver letters of reasonable accommodation during faculty office hours or by appointment. Faculty members have the authority to ask students to discuss such letters during their designated office hours to protect the privacy of the student. For additional information see the Office of Disability Accommodation website at <http://www.unt.edu/oda>. You may also contact them by phone at (940) 565-4323.

### Sexual Discrimination, Harassment, and Assault

UNT is committed to providing an environment free of all forms of discrimination and sexual harassment, including sexual assault, domestic violence, dating violence, and stalking. If you (or someone you know) has experienced or experiences any of these acts of aggression, please know that you are not alone. The federal Title IX law makes it clear that violence and harassment based on sex and gender are Civil Rights offenses. UNT has staff members trained to support you in navigating campus life, accessing health and counseling services, providing academic and housing accommodations, helping with legal protective orders, and more.
UNT's Dean of Students web site at <http://deanofstudents.unt.edu/resources> offers a range of on-campus and off-campus resources to help support survivors, depending on their unique needs. The Student Advocate may be reached through email at SurvivorAdvocate@unt.edu or by calling the Dean of Students' office at (940) 565-2648. You are not alone; we are here to help.

Instructor's Web Site
The instructor maintains a web site at <http://www.paulhensel.org> that includes -- among other things -- teaching policies, solutions to common student writing problems, syllabi for my other courses, and Internet resources for students of international relations. Students are strongly encouraged to become familiar with this web site during the semester. The online version of this syllabus can be found at: <http://www.paulhensel.org/Teaching/psci2300.html>.

Course Schedule
"There are three kinds of lies: lies, damn lies, and statistics."
--Benjamin Disraeli/Mark Twain

"People can come up with statistics to prove anything, Kent. 40% of all people know that."
--Homer Simpson

1. Monday, Aug. 26: Overview of Course
   • Assigned Readings: None
   • Overview: Introduction to the course and the instructor; no substantive lecture today.

2-5. Wednesday, Aug. 28 - Wednesday, Sept. 4: The Scientific Approach to Knowledge
4. Monday, Sept. 2: NO CLASS (Labor Day)
   • Day 1 of this topic: The scientific approach to knowledge
     --Pollock: Introduction
   • Day 2: Theories and hypotheses
     --Pollock chapter 3: Introduction, "Proposing Explanations," and "Framing Hypotheses" sections only
   • Day 3: The scientific research process
     --No new reading assigned
   • Overview of Topic: The first general topic will introduce students to the scientific study of politics. We will discuss how the scientific approach differs from other possible sources of knowledge, and how this approach works in political science. We will then discuss theories and hypotheses, which are important building blocks in the scientific approach. After completing this topic, students should have a good idea about what the primary goals of political science are and (in general terms) how we pursue these goals; the rest of the semester will explore the techniques that are used to pursue them.

6-9. Friday, Sept. 6 - Friday, Sept. 13: Research Design and Causality
   • Day 1 of this topic: Experiments
     --Pollock chapter 4: Introduction and "Experimental Designs" sections only
   • Day 2: Threats to causality / Controlled comparison, quasi-experiments, and other quantitative solutions
--Pollock chapter 4: "Controlled Comparison," "Three Scenarios," and Summary sections only

**Day 3**: Case studies and comparative method as solutions

**Day 4**: Carrying out case studies

**Overview of Topic**: This topic will discuss research design issues, particularly relating to the ways that poli sci research differs from work in the natural sciences. This will include the role of experimental design in many sciences, with discussion of the limits of this approach in political science; the difference between covariation and causation as an obstacle to causal inference in the social sciences; and a number of strategies to help overcome these problems (ranging from comparative case studies to quasi-experimental techniques and statistical control). The Ansolabehere et al. reading is a true experiment in political science, the Campbell and Ross reading is a classic application of quasi-experimental design, the Ishiyama reading applies the Most Similar Systems design for comparative case studies, and the Munck and Leff reading applies the Most Different Systems design for comparative case studies. For each reading, think about how convincing the authors' approach is (are you convinced that Ansolabehere et al.'s findings would hold outside of the laboratory setting? are you convinced that Campbell and Ross's findings actually reflect the causal process they claim? are you convinced that by looking at otherwise similar cases, Ishiyama is able to isolate causal processes? are you convinced that by looking at otherwise very different cases, Munck and Leff are able to isolate causal processes?).

10-12. Monday, Sept. 16 - Friday, Sept. 20: Political Science Research Skills

**Homework #1 (article summary) handed out Sept. 20, due Sept. 27**

**Day 1** of this topic: Reading journal articles
--Skim over the journal articles that we read earlier in the semester (Ansolabehere et al., Campbell/Ross, Ishiyama, and Munck/Leff), focusing on how each article is organized (using the six sections of most articles that Powner discusses at the beginning of the assigned reading). Be sure to bring your copies of the articles to class, so we can talk about the various elements that they include.

**Day 2**: Researching and writing literature reviews

**Day 3**: Citing sources

**Overview of Topic**: This topic will cover a number of skills that will be invaluable in the rest of your undergraduate studies: what to look for when reading poli sci research; how to search for relevant research on your topic and write a literature review; and why, when, and how to cite your sources when writing a poli sci research paper.
• **Day 1 of this topic:** Concepts and variables  
  --Pollock chapter 1  
• **Day 2:** Measurement error  
  --No new reading  
• **Day 3:** Using existing data sets  
  --No new reading  
• **Overview of Topic:** This topic will address the difference between concepts, variables, and indicators. We will also consider measurement error and issues related to reliability and validity. The Mondak and Sanders article illustrates many of these measurement issues with respect to the concept of tolerance, and highlights the difficulties inherent in measuring the concept accurately. We will then consider where and how political scientists get our data. We will discuss the benefits and drawbacks of using existing data sets as well as collecting your own data, and (if there is time) we will look at some major data sets that are used by political scientists studying American government, comparative politics, and international relations.

16. Monday, Sept. 30: Review  
• No new reading  
• **Overview of Topic:** This class period will be devoted to catching up on any remaining material if needed, as well as reviewing for the first midterm exam.

17. Wednesday, Oct. 2: MIDTERM EXAM #1

18-21. Friday, Oct. 4 - Friday, Oct. 11: Descriptive Statistics  
• **Homework #2 (descriptive statistics) handed out Oct. 11, due Oct. 18**  
• **Day 1 of this topic:** Describing nominal-level data  
  --Pollock chapter 2  
• **Day 2:** Describing ordinal-level data  
  --No new reading  
• **Day 3:** Describing interval-level data  
  --Pollock chapter 6: "Variation Revisited: The Standard Deviation" section only  
• **Day 4:** Using SPSS (or PSPP)  
  --Paul R. Hensel, "SPSS Guide"  
  <https://paulhensel.org/Teaching/SPSS.pdf>  
• **Overview of Topic:** The remainder of the course will examine specific methods and techniques that we use in the scientific study of politics. The first topic in this section of the course will focus on the use of descriptive statistics to summarize data, beginning with such basic descriptives as percentages, proportions, and histograms. We will then move on to measures of central tendency (mean, median, and mode) and measures of dispersion (such as range, variance, and standard deviation). These techniques are important for getting a basic understanding of any variable of interest, which you will need to do before you can start studying how this variable might be related to other variables. At the end of the topic, we will begin exploring SPSS (or PSPP) software, which will be used for future homework assignments.

• **Days 1-2 of this topic:** Sampling
--Pollock chapter 6 ("Foundations of Statistical Inference")

Day 3: The normal distribution and Z-scores
--No new reading
Day 4: Estimating population parameters
--No new reading

Overview of Topic: This topic will begin by looking at the basic idea of inferential statistics, or using a small sample of individuals to study the characteristics or attitudes of an entire population. We will explore probability and the normal curve/distribution, which are very useful for a lot of what we do. We will then explore some of the ways that these topics are applied, such as the calculation of confidence intervals for the purpose of inference. These techniques are necessary for studying topics where we do not have easy access to the entire population of interest, such as political surveys (which rarely interview more than several thousand individuals but seek to understand the attitudes of an entire group or country).

26-30. Wednesday, Oct. 23 - Friday, Nov. 1 Statistical Significance / Hypothesis Testing I (interval/ratio variables)

- Homework #3 (hypothesis testing) handed out Nov. 1, due Nov. 8
- Days 1-2 of this topic: Introduction to significance and hypothesis testing
  --Pollock chapter 7: Introduction and "Statistical Significance" section only
- Days 3-4: Hypothesis testing for interval/ratio-level variables: Difference of means tests
  --Pollock chapter 7: read everything before "The Chi-Square Test of Significance" section
- Day 5: Analysis of variance (ANOVA)
  --No new reading

Overview of Topic: The next group of lectures will examine the process of hypothesis testing, which is used to determine whether the differences we observe are "statistically significant." We will begin with hypothesis tests about the difference of means between two samples, where the goal is to compare the means of two different groups. We will then examine analysis of variance (ANOVA), which compares the means across more than two groups. These techniques are useful for all kinds of comparisons between groups, ranging from the grades of different groups of students to the political attitudes of different groups of voters or the socioeconomic conditions in different types of countries.

31. Monday, Nov. 4: Review
- No new reading

Overview of Topic: This class period will be devoted to catching up on any remaining material if needed, as well as reviewing for the second midterm exam.

32. Wednesday, Nov. 6: MIDTERM EXAM #2

33-34. Friday, Nov. 8 - Monday, Nov. 11: Hypothesis Testing II (nominal/ordinal variables)

- Days 1-2 of this topic: Hypothesis testing for nominal/ordinal-level variables: Crosstabs and $X^2$ tests
  --Pollock chapter 7: "The Chi-Square Test of Significance" section only

Overview of Topic: These two lectures will conclude the section on hypothesis testing by examining how we test hypotheses about nominal or ordinal level variables. We will focus on the use of crosstabulation and Chi-square ($X^2$) tests.

35-37. Wednesday, Nov. 13 - Friday, Nov. 18: Measures of Association
• **Homework #4 (hyp. testing & association) handed out Nov. 18, due Nov. 25**
  • **Day 1 of this topic**: Association between nominal/ordinal-level variables (Phi, V, Lambda)
    --Pollock chapter 7: "Measures of Association" and Summary sections only
  • **Day 2**: More on association between nominal/ordinal-level variables (Somers’ d, Odds Ratio)
    --Pollock chapter 9: pp. 217-220 only (probability, odds, odds ratio)
  • **Day 3**: Association between interval/ratio-level variables (scatterplots, correlation)
    --Pollock chapter 8: Introduction, "Correlation" section only

**Overview of Topic**: The next general topic will address ways to measure the association between variables, which provides much more information than simply whether or not there is a statistically significant difference. These techniques are useful for evaluating the extent to which two variables are related to each other, or the extent to which knowledge of one variable allows us to predict the value of the other.

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38-43. Wednesday, Nov. 20 - Monday, Dec. 2: Regression and Multivariate Analysis

42. Friday, Nov. 29: NO CLASS (Thanksgiving)
• **Homework #5 (regression) handed out Nov. 27, due Dec. 4**
  • **Days 1-2 of this topic**: Bivariate regression
    --Pollock chapter 8: "Bivariate Regression" and "R-Square" sections only
  • **Days 3-4**: Multiple regression
    --Pollock chapter 8: "Multiple Regression" and Summary sections only
  • **Days 5-6**: More advanced methods
    --Pollock chapter 9

**Overview of Topic**: The last few weeks of the semester will examine how we study associations between interval- or ratio-level variables. We will begin by focusing on bivariate relationships (i.e., associations between one independent variable and one dependent variable). This will cover the interpretation of bivariate regression and such matters as significance testing and assessing model fit. We will then expand this to multiple regression analysis (bringing in more than one independent variable) and to some extensions, such as the use of dummy variables, interaction terms, and model specification. We will conclude with a brief examination of more advanced techniques (logit / probit analysis, multinomial and ordered models, survival / duration analysis, event count models, and selection models) that you will frequently see in published research in Political Science. This will help you to understand the main idea when you are reading research in this field (such as in your upper-division courses), and it may help guide you to the most appropriate method if you are undertaking your own research later.

44. Wednesday, Dec. 4: Course Wrapup
• Read Pollock chapter 10
• **Overview of Topic**: This is the day when we try to wrap up the entire course and bring everything together. Look back to the summary of the class in this syllabus and in the notes from the first class meeting, as those offered a brief outline of what the course was meant to do, what you were expected to learn, and what skills you were expected to develop through the course.

45. Friday, Dec. 6: NO CLASS (Reading Day)

Monday, Dec. 9: FINAL EXAM, 10:30 AM-12:30 PM (in the regular classroom)
• The final exam is held on the day during Final Exam Week that is assigned by UNT, based on the time when our class meets: <http://registrar.unt.edu/exams/final-exam-schedule>