

PSCI 3300.001: Political Science Research Methods

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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 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). We will also examine such non-quantitative approaches as experiments, case studies, and comparative method, which are also an important part of the science of studying politics.

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 four non-cumulative examinations, four quantitative homework assignments (which will require the use of SPSS or PSPP statistical software for data analysis), and eleven shorter exercises or quizzes (most of which will be completed online through Canvas).

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. Students should be able to formulate theoretical arguments and testable hypotheses, and to test these hypotheses in a variety of ways. 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.

This course also fulfills the CLASS requirement for Communication and Digital Skills: "At the end of this course, students should be able to demonstrate effective communication using a digital technology platform and do at least two of the following: (1) demonstrate the ability to communicate a central idea effectively using appropriate organization/structure, (2) demonstrate the ability to develop content at an advanced level using a combination of effective supporting materials, (3) demonstrate the ability to engage in verbal and nonverbal communication behaviors that are appropriate for the audience and adhere to the conventions of the medium selected (written, oral, or visual)." The digital technology platform to be used is SPSS or PSPP statistical software, which will be used in four of the course's homework assignments. The ability to develop content at an advanced level will be demonstrated in these homework assignments, where statistical analysis will be used to produce tables, figures, and other output that will be used to evaluate hypotheses about political outcomes. The ability to engage in appropriate written communication will also be demonstrated in these homework assignments, where the results of the statistical analyses will be analyzed and interpreted carefully to draw conclusions about the hypotheses being tested and discuss implications for the study and practice of politics.

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!

Paul M. Kellstedt, Guy D. Whitten, and Steven A. Tuch (2023). *The Fundamentals of Social Research*, 1st ed. Cambridge University Press. ISBN 978-1-107-56916-4. *This ISBN number is for the paperback version of the book, which is the version I ordered through the bookstore, but any format of the book is fine*

as long as it is the correct edition. Note that this is different from earlier editions published by Kellstedt and Whitten under the name The Fundamentals of Political Science Research.

- **Canvas:** The remaining readings are available online through Canvas, 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 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 Mac or Windows at a cost of \$53.35 (6 month rental) or \$63.25 (12 month rental) at the following site (you can use any version of SPSS that will install and run on your computer – we won't be using any advanced features that require the absolute latest version):

<<https://untsystem.onthehub.com/WebStore/ProductsByMajorVersionList.aspx>>

There is also a free statistical package called PSPP that is very similar to SPSS and can be used for all of the homework assignments. 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 works just as well as SPSS for the techniques used in course homework assignments). This may be downloaded freely for Mac, Windows, and Linux platforms -- if you are using this on a Mac, be sure to follow the instructions in the support note from Apple that PSPP links to (<https://support.apple.com/en-us/102445>), explaining how to install software that is not downloaded from Apple's official App Store.

<<https://www.gnu.org/software/pspp/get.html>>

Course Requirements

Please note that this course is not graded on attendance, and almost all assignments except for the exams can be completed online, to make sure that students have no incentive to come to class if they have recently been exposed to or are showing symptoms of Covid-19, the flu, or similar conditions that are common in the Denton area this time of year. This does NOT mean that you are not expected to come to class whenever you are healthy, though; class attendance is strongly recommended. Throughout the Covid era, students who rarely came to class have done poorly in my courses, even if they thought they got enough information from friends, GroupMe, or elsewhere. Seeing and hearing the course material in person, being part of the class discussion of this material, and participating in the review of recent topics that begins most class periods makes a huge difference in learning and in grades.

(1) **Examinations:** Four (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 (typically requiring the interpretation of results). Each exam will be worth **15%** of the total course grade. Be sure to be on time; once the first student leaves the exam, anybody else who enters to take the exam will lose five letter grades.

(2) **Short Assignments and Quizzes (Preparation for Class):** An important part of a course like this is making sure that students understand the concepts as the semester is moving along. Students are expected to prepare for each class meeting by doing the assigned readings and thinking about the assigned discussion topics as described in the syllabus before class. This will be evaluated with **11 assignments, ten of which must be completed through Canvas before class on the day when they are assigned – note that the other one will be completed in class as listed in the syllabus**. Many of these are open-book/open-note quizzes on the readings assigned for that day, and others are brief applications of topics covered in the day's assigned readings or in recent class meetings that will then be discussed in class that day. Because each of these assignments is meant to prepare for classroom discussion on the day for which it was assigned, to receive credit, it must be completed **by the start of class on the due date** listed in the syllabus (**no assignments will be accepted after that time**). Together,

these assignments will be worth **20%** of the total course grade; each student's lowest assignment grade will be dropped.

(3) Quantitative Homework: There is no better way to learn concepts than through hands-on experience. There will be **four (4) homework assignments**, which will each be posted on Canvas one week before the due date. Together, these assignments will be worth **20%** of the total course grade. Unlike the online assignments, these homework assignments may be turned in after the listed due date for partial credit, because these are important learning experiences that help you develop the skills that you are expected to have after completing this course. Homework assignments turned in after the start of class on the due date will face a late penalty, though.

(4) Attendance and Participation: Students are expected to attend class regularly, from the start of the scheduled class period to the end of that period, although I will not waste everybody's time taking attendance during class. Students who fail to attend class regularly will typically do poorly in the course, even if they think they are able to get enough information from friends, GroupMe, or elsewhere. Seeing and hearing the course material in person, being part of the class discussion of this material, and participating in the review of recent topics makes a huge difference in learning and in grades, and all students are responsible for all material presented in class whether or not they were in class when that material was presented.

Course Rules

(1) Face-to-Face Class Meetings: Our class will meet face-to-face on the schedule listed in the syllabus, with each class meeting including both lecturing by the instructor and class discussion of the assigned topics. I will not record the class meetings for posting online, nor will I conduct class meetings in a hybrid format that is broadcast online. I recommend making arrangements with one or more other students in the course to share copies of notes in case you might have to miss class.

(2) Attendance: Students are expected to attend every class meeting, even if attendance is not directly considered in calculating the course grade. Students who fail to attend class regularly will typically do poorly in the course, even if they think they are able to get enough information from friends, GroupMe, or elsewhere. Seeing and hearing the course material in person, being part of the class discussion of this material, and participating in the review of recent topics makes a huge difference in learning and in grades, and all students are responsible for all material presented in class whether or not they were in class when that material was presented.

(3) The Classroom Setting: 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 <<https://studentaffairs.unt.edu/dean-of-students/conduct/index.html>>).

(4) Lecture Notes / PowerPoint Slides: The instructor's lecture notes and PowerPoint slides will not be posted online or otherwise handed out to students. If you think you might be 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 sure to take notes on verbal lecture material as well as the brief overviews presented on the slides.

(5) Keep Backups: 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, Google Drive, or Microsoft OneDrive). No penalty-free 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.

(6) Makeup Exams: Makeup exams, whether for full credit or not, will 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 as soon as possible after the missed exam, and must send the instructor their list of available times on Reading Day 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 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 (50%). 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.

(7) Academic Integrity, Plagiarism, and Generative AI/Chatbots: All work turned in for this course must be your own original work. Such actions as plagiarizing by using a source without giving it appropriate credit, or using material written by somebody else or by generative AI/chatbots like ChatGPT and presenting it as your own, represent violations of academic integrity. Please note that penalties will apply even if you did not knowingly intend to plagiarize or cheat – you must be familiar with the rules of academic integrity and doing your own original work, whether this is at UNT or later in your career, and ignorance is no excuse.

Academic integrity is defined in the UNT Policy on Student Standards for Academic Integrity: <<https://policy.unt.edu/policy/06-003>>. This covers 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. Any suspected case of academic dishonesty will be handled in accordance with current University policy and procedures, as described at <<https://vpaa.unt.edu/ss/integrity>>. If this is your first academic integrity violation, you can expect a failing grade on the assignment, and you will be reported to the university's Academic Integrity office; repeat violations in one or more courses will lead to stronger sanctions up to and including expulsion from UNT.

(8) Grading Policies: UNT does not use plus/minus grading, so there are only five possible grades. I always grade on a straight scale, with 90.0-100.0%=A, 80.0-89.9%=B, 70.0-79.9%=C, 60.0-69.9%=D, and less than 60.0%=F. 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, if any, will be offered in class during the last class meeting before Thanksgiving (for fall semesters) or spring break (for spring semesters).

Late work will be penalized with the loss of one letter grade (10%) for each full or partial day that it is late, compounding at midnight. Grades will only be curved if the grade distribution on an assignment requires it -- this is sometimes the case for multiple choice-style exams, but usually not the case for essay exams, research papers, and other written assignments.

All other grading-related policies and expectations are described in more detail at <<https://www.paulhensel.org/teaching.html>>. Failure to visit that web site does not constitute a valid excuse for ignorance of these policies.

(9) End of the Course: 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. If you may need to miss the scheduled final exam time, you must contact Dr.

Hensel as soon as you know about the potential conflict/issue, to arrange an early exam before the regularly scheduled exam.

(10) Canceling Class: I will never cancel class on my own; unless UNT cancels classes (and you receive official notification 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 on a day when UNT does not cancel class 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.

(11) Exceptions: Any exceptions to these policies 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.

(12) Changes: 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 a Canvas announcement; students are responsible for making sure that they regularly check the email account that receives emails from Canvas, and/or check the Announcements tab for this course in Canvas in case there is some sort of email problem.

(13) Warning about Canvas Gradebook and Scheduling: Please note that the gradebook in Canvas may not give you a fully accurate summary of your grade for this course. Canvas is best at handling a predetermined number of assignments that all count toward the final grade for the course, and it struggles with missing or late work (rather than treating a missing assignment as a zero, Canvas leaves it out of the calculation, wrongly suggesting that the course grade is better than it really is – which can mean a startling change in the grade when the instructor manually converts missing assignments to zero after the final exam when they can no longer be turned in for partial credit). This syllabus tells you which assignments count for which portions of the overall course grade; if you are having problems determining your grade, you are always welcome to talk with the instructor during office hours (but remember that I cannot discuss grades over phone or email).

Also note that Canvas is unreliable as the only way to schedule/organize your semester. It does not attach dates to assigned readings that are posted on Canvas, or to readings in textbooks or other physical materials, so relying solely on the Canvas schedule will leave you unable to stay caught up in this and other courses. Even where Canvas does allow attaching a date and time to an assignment (such as a quiz, paper, or exam), its "due date" settings may not mean what you think they do (for example, is that the time when an exam begins or when it ends and is "due" to be turned in?). While it is unlikely, there may even be a typo or other error in the date or time listed for an assignment in Canvas (if you discover what you believe to be such an error, please bring it to the instructor's attention immediately!). This syllabus is the definitive guide to which readings, quizzes, papers, exams, etc. are assigned for the course and when they are due.

UNT Policies

Americans with Disabilities Act

UNT is committed to making reasonable academic accommodation for students with disabilities. Students seeking reasonable accommodation must register with the Office of Disability Access (ODA) each semester to verify their eligibility. If a disability is verified, the ODA will contact me with a letter listing recommended accommodations; you will then need to discuss these with me so we can decide how to meet your specific needs in the course. It is advisable to discuss these issues as early as possible in the semester to avoid any delay in implementation; **I can not grant you an accommodation that you did not discuss with me before the assignment in question was due.** For additional information see the Office of Disability Accommodation website at <<https://www.unt.edu/oda>> or contact them by phone at (940) 565-4323.

Prohibition of Discrimination, Harassment, and Retaliation

UNT prohibits discrimination and harassment because of race, color, national origin, religion, sex, sexual orientation, gender identity, gender expression, age, disability, genetic information, veteran status, or any other characteristic protected under applicable federal or state law in its application and admission processes; educational programs and activities; employment policies, procedures, and processes; and university facilities. The University takes active measures to prevent such conduct and investigates and takes remedial action when appropriate.

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 <<https://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.

Student Resources at UNT

In recent semesters, many students have experienced unexpected health, family, work, or other issues. If any such issue comes up, please do not hesitate to contact me, so we can try to work out a reasonable solution. Remember, I can't help you if you don't let me! Here are a few resources that UNT has made available for students facing unexpected difficulties:

- Student Counseling and Testing Services (couples counseling, individual/group sessions to help manage depression, eating disorders, grief, self esteem/identity, substance abuse, stress, and much more):

List of services: <https://studentaffairs.unt.edu/counseling-and-testing-services/services>

FAQ: <https://studentaffairs.unt.edu/counseling-and-testing-services/resources-and-self-help/faq>

Emergency contacts: <https://studentaffairs.unt.edu/student-counseling/emergency-contacts>

- Student Health and Wellness Center (offering everything from Covid testing to flu vaccines, gynecological care, X-rays and lab diagnostics, vision and dental care, and much more):

<https://studentaffairs.unt.edu/student-health-and-wellness-center>

- Other Wellbeing and Safety Resources:

<https://studentaffairs.unt.edu/wellbeing-and-safety>

Instructor's Web Site

The instructor maintains a web site at <<https://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 official version of this syllabus can always be found at the Canvas site for this course, but the online version of this syllabus can also be found at:

<<https://www.paulhensel.org/Teaching/psci3300.html>>.

Course Schedule

"There are three kinds of lies: lies, damn lies, and statistics."

--attributed to Benjamin Disraeli/Mark Twain

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

--Homer Simpson

Overview of Course

- 1. Monday, Aug. 17: Introduction
 - Assigned Readings: None
- *Overview*: Introduction to the course and the instructor; no substantive lecture today.
- **Assignment #1 due by 5 PM on Monday, 8/24/26: Syllabus quiz (available in Canvas)**; due to students adding the course, this quiz will remain open for a full week; all other quizzes will be locked at the start of the class period on the day when they are due, because they are meant to assess preparation before class.

The Scientific Approach to Knowledge

- 2. Wednesday, Aug. 19: The scientific approach to knowledge
 - KWT (Kellstedt-Whitten-Tuch book): section 1.1, "Social Science?" (pp. 1-3)
 - Canvas: Rochelle Walensky (5/13/2025), "What Do We Do with Uncertainty? A Former CDC Director's Advice to New Physicians and Scientists." *Stat News*.
 - Canvas: Rahul Rao (7/3/2023). "Cold Fusion is Making a Scientific Comeback." *Popular Science*.
- 3. Friday, Aug. 21: Building blocks of science
 - KWT: sections 1.2-1.5 (pp. 4-19), chapter 2 ("The Art of Theory Building," all), section 12.1 ("Two Routes Toward a New Scientific project," pp. 246-251)
- 4. Monday, Aug. 24: Causal inference
 - Assignment #2 due before class today: Theory & Hypotheses exercise (available in Canvas)**
 - KWT: chapter 3 ("Evaluating Causal Relationships," all).

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, and think about how science learns from the results of hypothesis tests. Finally, we will begin with the problem of causation vs. covariation in the social sciences. 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 various approaches and techniques that are used to pursue them.

Research Design and Causality

- 5. Wednesday, Aug. 26: Experiments
 - **Assignment #3 due before class today: Experiments quiz (available in Canvas)**
 - KWT: sections 4.1-4.2 ("Comparison as the Key to Establishing Causal Relationships" and "Experimental Research Designs," pp. 65-77).
 - Canvas: Stephen Ansolabehere, Shanto Iyengar, Adam Simon, and Nicholas Valentino (1994). "Does Attack Advertising Demobilize the Electorate?" *American Political Science Review* 88, 4 (December): 829-838.
- 6. Friday, Aug. 28: Quasi-experiments / Statistical control
 - **Assignment #4 due before class today: Quasi-experiments quiz (available in Canvas)**
 - Canvas: Donald T. Campbell and H. Laurence Ross (1968). "The Connecticut Crackdown on Speeding: Time-Series Data in Quasi-Experimental Analysis." *Law and Society Review* 3, 1: 33-54.
 - KWT: remainder of chapter 4 (pp. 77-83)
- 7. Monday, Aug. 31: Case studies and comparative method
 - **Assignment #5 due before class today: Comparative Method quiz (available in Canvas)**
 - Canvas: Lee Demetrius Walker (2009). "Delegative Democratic Attitudes and Institutional Support in Central America." *Comparative Politics* 42, 1 (October): 83-101 .

Overview of Topic: This topic will discuss research design issues, focusing on some of the ways that political scientists try to address the problem of causation vs. covariation. This will include the role of experimental design (widely used in both the natural and social sciences), with discussion of the limits of this approach in political science, 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, and the Walker reading applies the Most Similar 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 from Campbell and Ross that the speeding crackdown actually had an impact? are you convinced that by looking at otherwise similar cases, Walker is able to isolate causal processes?).

Political Science Research Skills

- 8. Wednesday, Sept. 2: Reading journal articles
 - **Assignment #6 due before class today: Reading Articles quiz (available in Canvas)**
 - Canvas: Leanne Powner (2023). "Reading and Understanding Political Science."
<<https://leannepowner.com/tchdocs/readingsps23.pdf>>
 - Canvas: Jesse C. Johnson and Brett Ashley Leeds (2011). "Defense Pacts: A Prescription for Peace?" *Foreign Policy Analysis* 7, 1 (January): 45-65.
 - Skim over the journal articles that we read earlier in the semester (Ansolabehere et al., Campbell/Ross, and Walker) as well as today's assigned article, focusing on how each article is organized (as discussed by Powner). Be ready to talk about how these articles are organized, and about how different types of articles look different.
- 9. Friday, Sept. 4: Organizing your research
 - No new reading
- 10. Monday, Sept. 7: **NO CLASS (Labor Day)**
- 11. Wednesday, Sept. 9: Using and Mis-using AI
 - No new reading
- 12. Friday, Sept. 11: Evaluating sources in research
 - Canvas: Cameron Thies (2002). "A Pragmatic Guide to Qualitative Historical Analysis in the Study of International Relations." *International Studies Perspectives* 3: 351-372.
- 13. Monday, Sept. 14: Citing sources
 - Web: Paul R. Hensel (2022), "Paul Hensel's Citations and Plagiarism Page."
<<https://paulhensel.org/teachcite.html>>

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 evaluate sources when researching a case study (or reading the news, writing a research paper, or collecting data); warnings about the misuse of generative AI tools like ChatGPT; and why, when, and how to cite your sources.

14. Wednesday, Sept. 16: EXAM #1

Concepts, Variables, and Measurement

- 15. Friday, Sept. 18: Concepts and variables
 - Assignment #7 due before class today: Concepts & Variables quiz (available in Canvas)**
 - KWT: chapter 6 ("Measuring Concepts of Interest," all)
- 16. Monday, Sept. 21: Measurement error
 - Assignment #8 due before class today: Measurement exercise (available in Canvas)**
 - No new reading
- 17. Wednesday, Sept. 23: Using existing data sets / Collecting your own data
 - 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. 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 how these issues play out in some major data sets that are used by political scientists studying American government, comparative politics, and international relations.

Using SPSS (or PSPP)

- 18. Friday, Sept. 25: Overview of SPSS/PSPP

--**Assignment #9 completed IN CLASS today: in-class survey** (*this is the only assignment that will be completed in class rather than online through Canvas – during class today, everybody will complete a survey that replicates questions from the American National Election Studies and General Social Survey, which we will use for examples of statistical techniques in class later in the semester*)

--Paul R. Hensel, "SPSS Guide"

<<https://paulhensel.org/Teaching/SPSS.pdf>>

Overview of Topic: This class period will be devoted to exploring the SPSS or PSPP software that will be used for future homework assignments. We will consider the differences between SPSS and PSPP, and we will examine the ways that these software packages work. After this, students should be able to use SPSS or PSPP to complete the remaining homework assignments for the course.

Descriptive Statistics

- 19. Monday, Sept. 28: Types of variables / Intro to descriptive statistics
 - KWT: sections 7.1, 7.2, 7.5 ("Getting to Know Your Data Statistically," "What is the Variable's Measurement Metric?," and "Limitations of Descriptive Analyses and Graphs"; pp. 114-119 and 127-128)
- 20. Wednesday, Sept. 30: Describing nominal and ordinal-level data
 - KWT: section 7.3 ("Describing Categorical Variables," pp. 119-121)
- 21. Friday, Oct. 2: Finishing coverage of nominal and ordinal-level data
 - No new reading
- 22. Monday, Oct. 5: Describing interval-level data
 - Assignment #10 due before class today: Descriptive Statistics exercise (available in Canvas)**
 - KWT: section 7.4 ("Describing Continuous Variables," pp. 119-127)
- 23. Wednesday, Oct. 7: Finishing coverage of interval-level data
 - No new reading

Overview of Topic: The remainder of the course will examine specific methods and techniques that we use in the scientific study of politics. Here we start with the use of descriptive statistics to summarize data, beginning with such basic descriptives as percentages, bar and pie graphs/charts, and histograms. We will then move on to measures of central tendency (mean, median, and mode) and measures of dispersion (such as standard deviation). These techniques are important for getting a basic understanding of any variable, which you should always do before you can start studying how this variable might be related to other variables. These will also be useful to you in many different careers, where you may need to create reports showing patterns or trends in business, sales, politics, and more.

24. Friday, Oct. 9: EXAM #2

Sampling and Inferential Statistics

- 25. Monday, Oct. 12: Intro to Sampling
 - Assignment #11 due before class today: Sampling & Polling quiz (available in Canvas)**
 - KWT: chapter 5 ("Survey Research," all)
 - Marc Novicoff (5/19/2025). "Polling was Quietly Still Bad in 2024." *The Atlantic*.
- 26. Wednesday, Oct. 14: Sampling, continued
 - Homework #1 due today: Descriptive statistics (turned in through Canvas)** *This assignment will use SPSS or PSPP software to run some descriptive statistics on data sets that I will provide for you, and to interpret the results of these statistics.*
 - KWT: chapter 8 ("Probability and Statistical Inference," all)
- 27. Friday, Oct. 16: 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 discuss how pollsters or survey designers attempt to understand political attitudes or presidential approval by interviewing no more than a few thousand respondents, as well as why these attempts aren't always successful. 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.

Statistical Significance & Hypothesis Testing

- 28. Monday, Oct. 19: Intro to Hypothesis Testing

- KWT: sections 9.1-9.2-9.3 ("Bivariate Hypothesis Tests and Establishing Causal Relationships," "Choosing the Right Bivariate Hypothesis Test," and "All Roads Lead to p": pp. 147-152)

Overview of Topic: Here we begin to examine the process of hypothesis testing, which is used to determine whether the differences we observe are "statistically significant" (a key element in the scientific research process). The basic ideas from this topic will be important to everything else that we will cover in this course.

Hypothesis Testing: Comparing Groups

- 29. Wednesday, Oct. 21: Crosstabs and X^2 tests

- KWT: section 9.4.1 ("Tabular Analysis": pp. 152-158)

- 30. Friday, Oct. 23: Association between nominal/ordinal-level variables

- No new reading

- 31. Monday, Oct. 26: Difference of Means (t-tests)

- KWT: section 9.4.2 ("Difference of Means": pp. 159-162)

- 32. Wednesday, Oct. 28: Analysis of Variance (ANOVA)

- Homework #2 due today: Hypothesis Testing-Categorical (turned in through Canvas)** This assignment will use SPSS or PSPP software to run some hypothesis tests on categorical variables using data sets that I will provide for you, and to interpret the results of these tests.

- KWT: sections 9.4.4-9.5 ("Analysis of Variance" and "Multiple Comparisons": pp. 168-172)

Overview of Topic: This topic will focus on the use of statistical significance for hypothesis testing about categorical (nominal or ordinal) variables. We will begin by using crosstabulation and Chi-square (X^2) tests, which are useful for exploring the significance of the relationship between two variables. We will then consider ways to assess the direction and strength of this relationship (if any), which provides much more useful information about the extent to which knowledge of one variable allows us to predict the value of the other. We will conclude by considering how to compare groups' values on a continuous dependent variable. These techniques are useful for all kinds of comparisons between groups, ranging from the grades of different groups of students to the attitudes of different groups of voters or the conditions in different types of countries.

33. Friday, Oct. 30: EXAM #3

Hypothesis Testing: Scatterplots, Correlation, and Bivariate Regression

- 34. Monday, Nov. 2: Scatterplots

- KWT: section 9.4.3 ("Correlation Coefficient," pp. 162-168)

- 35. Wednesday, Nov. 4: Correlation

- No new reading

- 36. Friday, Nov. 6: Bivariate regression

- KWT: chapter 10 ("Two-Variable Regression Models," sections 10.1-10.3: pp. 177-184)

- 37. Monday, Nov. 9: Evaluating bivariate regression

- KWT: rest of chapter 10 (pp 184-198)

Overview of Topic: These lectures will begin the final portion of the course by assessing the relationship between continuous/interval variables. We will start by using scatterplots to get the basic idea, then use correlations to get a more precise measure of the strength and direction of these relationships. We will then use bivariate regression analysis to get even more detail, including such matters as significance testing and

assessing model fit.

Multiple Regression Analysis

- 38. Wednesday, Nov. 11: Multiple regression
 - Homework #3 due today: Hypothesis Testing-Continuous (turned in through Canvas)** *This assignment will use SPSS or PSPP software to run some hypothesis tests on continuous variables using data that I will provide for you, and to interpret the results of these tests.*
 - KWT: chapter 11 (“Multiple Regression,” sections 11.1-11.10: pp. 201-232)
- 39. Friday, Nov. 13: Multiple regression, continued
 - No new reading
- 40. Monday, Nov. 16: Extensions of multiple regression
 - No new reading

Overview of Topic: This topic will move beyond bivariate regression to examine how we use more than one independent variables to account for the value of a continuous/interval dependent variable. We will begin by bringing in more than one independent variable, which will change some of the interpretation of the regression model. We will then explore some extensions of regression analysis, such as the use of dummy variables, interaction terms, and model specification.

Logistic Regression & More Advanced Methods

- 41. Wednesday, Nov. 18: Logistic regression (logit)
 - KWT: section 11.11 “Dummy Dependent Variables” (pp. 232-241)
- 42. Friday, Nov. 20: Multinomial and ordered models
 - No new reading
- 43-45. Monday, Nov. 23 - Friday, Nov. 27: **NO CLASS (Thanksgiving Break)**
- 46. Monday, Nov. 30: Other advanced methods
 - No new reading

Overview of Topic: This topic will follow regression analysis by examining how political scientists study other types of dependent variables, including logistic regression (“logit”) analysis., multinomial and ordered models, survival / duration analysis, event count models, and selection models. This will help you to understand the main idea when you are reading research in this field (such as in your upper-division courses at UNT)g.

Course Wrapup

- 47. Wednesday, Dec. 2: Wrapup
 - Homework #4 due today: Regression (turned in through Canvas)** *This assignment will use SPSS or PSPP software to run some regression analyses using data sets that I will provide for you, and to interpret the results of these analyses.*
 - KWT: section 1.6 (“The Ethics of Social Research”, pp. 19-25); chapter 12 (“Putting It All Together to Produce Effective Research,” all)

Overview of Topic: Here, we wrap up the entire course and bring everything together, to give you better ideas for how to use the skills and ideas you learned in this course. 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.

- 48. Friday, Dec. 4: **NO CLASS (Reading Day)**

Wednesday, Dec. 9, 2026: FINAL EXAM, 8:00-10:00 AM (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: <<https://registrar.unt.edu/exams/final-exam-schedule>>*
- *Note that no late assignments will be accepted after the beginning of the final exam.*