

P SC 2013-003

Introduction to Political Analysis

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Time & Location:
Office Hours: By Appointment

Final exam time/date:

Course Prerequisite/Description: P SC 1113 or department permission; for majors only. Scientific method and the variety of approaches to a science of politics; problems of research design; methods and techniques of systematic political inquiry. (F, Sp)

Course Description

This is an introductory course on political science research methods and data analysis. In this course, you will develop skills to understand statistical concepts and apply those concepts. We will explore topics such as sampling, probability, variables, distributions, and many more. The course will feature a combination of lecture, discussion, and application. Additionally, you will develop basic political data analysis skills using R. These skills are increasingly valuable and necessary in the world of politics and policy. Whether you are continuing your academic journey to law school or a PhD program or entering a career in policy or politics, you will need to understand how to analyze and summarize data.

Course Objectives

By the end of the course, you should be able to:

1. Evaluate how concepts are measured empirically
2. Understand the role of develop convincing theories and articulate testable hypotheses
3. Make inferences about population means and proportions from samples
4. Correctly conduct and interpret hypothesis tests and p-values
5. Accurately summarize data using graphs and descriptive statistics
7. Conduct and communicate reproducible statistical analyses using R

Texts and Materials

- **SU:** Caldwell, S. (2013). Statistics Unplugged, 4th Edition.
- **QRM:** Quantitative Research Methods for Political Science, Public Policy and Public Administration. (<https://bookdown.org/ripberjt/qrmbook>) – available for free online
- **LR:** Learning R (On Canvas in reading files)
- **Other readings and materials will be posted to Canvas.**

Not Required, But Great Resources:

- Diez, D., Cetinkaya-Rundel, M., & Barr, C. (2019). OpenIntro Statistics, 4th Edition. OpenIntro (<https://leanpub.com/openintro-statistics>) -- available for free online
- Llaudet, E. & Imai, K. (2023). Data Analysis for Social Science: A Friendly and Practical Introduction.

Software

We will be using an open-source statistical software, called R. R is commonly used in social science research. We will also be using RStudio that will make working with R easier. During the first week, we will walk through how to download R and I will provide code guides during lecture. I encourage you to follow along and practice to familiarize yourself with R so that you will have exposure to R once we get to the lab portion of the class. Data Camp lessons will also assist with practice. If you are unable to download this software, R and RStudio are available on the computers in the Loveridge Computer Lab in Bizzell Library.

R is available on the Comprehensive R Archive Network CRAN: cran.rstudio.com

RStudio Desktop is available from the Posit website: posit.co/download/rstudio-desktop/. R and R studio [Guide to download](#)

Course Requirements and Basis of Course Grading:

A: 90+
B: 80-89.9
C: 70-79.9
D: 60-69.9
F: 0-60

I generally do not round grades up (e.g., rounding an 89.5 to an A) but I reserve the right to round up grades or not at my discretion. However, students will have opportunities for extra credit throughout the semester. If a student has not completed every assignment on time or attempted extra credit assignments, it is extremely unlikely that I will round up their final grade.

- **Quizzes (20 pts.)** (5 quizzes - Lowest is dropped)
- **Data Camp (10 pts.)** (5 Data camp exercises)
- **Participation and Attendance (10 pts.)** (2 excused absences)
- **Labs (15 pts.)** (5 lab reports - Lowest is dropped)
- **Article Review Assignment (15 pts.)** (1 article review)
- **Midterm (15 pts.)**
- **Final exam (15 pts.)**

Weekly Quizzes

Weekly quizzes will cover vocabulary, readings, and lecture materials. The quizzes will be available in person *in class* for the first part of the semester. Quizzes will be due on the date indicated in the schedule below. They will be taken at the end of the class period, following the lecture, on the designated day.

Data Camp

We will use data camp to supplement in class R labs. Data Camp lessons are a completion grade.

These are a great chance to either prepare for the data lab section at the end of the semester.

Note: Data Camp is a great tool to learn other programs (Excel, SQL, Python, etc.), so take advantage of it being free to you, if you're interested in learning some additional skills!

Participation and Attendance

Engaging in class discussions with your peers and asking questions are key to learning. You are given 2 excused absences. It is your responsibility to still read required materials, complete assignments that are due, and ask classmates for notes. I will provide a midterm participation grade and a final grade.

Labs

R Labs will take place in the second half of the semester. The majority of each lab will be done in class. Following each lab, you will be expected to submit your final lab as well as a report the following night. In the report, you will engage with the concepts and applications for that week. The questions you will need to answer for each report will be provided in the R file and on Canvas. More details on the labs will be available later in the semester.

Article Review (Referee Report)

You will complete one article review, sometimes called a referee report, during the second half of the semester.

This is a summarization of the research question, research design, and analysis of the paper's strengths and weaknesses. The details for this can be found on Canvas.

Midterm

The midterm exam will cover concepts and applications covered in the first half of the semester. We will have a preparation period beforehand.

Final Exam

The midterm exam will cover concepts and applications covered over *the entire semester*. We will have a preparation period beforehand.

[Fall 2025 Academic Calendar](#)

Tentative Course Schedule (Subject to Change)

Module	Date	Readings/Preparation for Class	Assignments Due
<i>Syllabus Review and Introduction</i>	8/26	Required: Course Syllabus	
<i>Introduction to Political Science as a Discipline; The Nature of Social Science</i>	8/28	Recommended: <ul style="list-style-type: none"> - Goodin, Robert E., and Hans-Dieter Klingemann (eds), <i>A New Handbook of Political Science</i> (Oxford, 1998; online edn, Oxford Academic, 1 Nov. 2003), https://doi-org.ezproxy.lib.ou.edu/10.1093/0198294719.001.0001 (Chp 1 sections 1-2) and (Chp 2)	
<i>Elements of Research Design</i> (types of variables, types of data, research design foundations)	9/2	Required: <ul style="list-style-type: none"> - QRM Chapter 1 and 2 - Data Analysis for Social Science Chapter 1 (Posted on Canvas) Recommended: <ul style="list-style-type: none"> - Singleton, Royce., and Straits, Bruce C. <i>Approaches to Social Research / Royce A. Singleton, Jr., Bruce C. Straits</i>. 5th ed.. New York: Oxford University Press, 2010. <i>(There is a 6th edition but the 5th edition is available in the OU library)</i> 	
<i>Elements of Research Design</i> (cont.)	9/4	Required: <ul style="list-style-type: none"> - QRM Chapter 2 	Quiz 1 in class: <i>(Covers 8/28 and 9/2 material)</i>
<i>Intro to Statistics</i>	9/9	Required: <ul style="list-style-type: none"> - SU Chapter 1 	

<i>Intro to Statistics</i>	9/11	Required: - SU Chapter 1	
<i>Intro to Statistics</i>	9/16	Required: - SU Chapter 1	
<i>Describing Data</i>	9/18	Required: - SU Chapter 2 Recommended: https://r-graph-gallery.com/	Quiz 2 in class: (Covers 9/4 and 9/9 material) Assignment due: <i>Data Camp: Introduction to R (9/21 @ 11:59pm)</i>
<i>Describing Data</i>	9/23	Required: - SU Chapter 2 Recommended: https://r-graph-gallery.com/	
<i>Getting Started with R</i>	9/25	Download R AND RStudio Guide to download (or use RStudio Desktop) and Excel in class. Recommended: - Peruse LR (On Canvas) or at R for Data Science	Quiz 3 in class: (Covers 9/16 and 9/18 material) Assignment due <i>Data Camp: Introduction to the Tidyverse (9/28 @ 11:59pm)</i>
<i>Getting Started with R</i>	9/30	Recommended: - Peruse LR (On Canvas) or at R for Data Science	
<i>Probability</i>	10/2	Required: - QRM Chapter 4	Quiz 4 in class: (Covers 9/18 and 9/23 material) Assignment due: <i>Data Camp: Data Manipulation with dplyr (10/5 @ 11:59pm)</i> Extra credit due: <i>Post 2 figures made in R to Canvas</i>

			<i>discussion page</i> (10/5 @ 11:59)
<i>Distributions</i>	10/7	Required: - SU Chapter 3 & 4	
	10/9	NO CLASS - OU VS TX	Assignment due: <i>Data Camp:</i> <i>Introduction to</i> <i>Statistics in R (10/12</i> @ 11:59pm)
<i>Foundations of Inference and Hypothesis Testing</i>	10/14	Required: - SU Chapter 5 and 6	
<i>Foundations of Inference and Hypothesis Testing</i>	10/16	Required: - SU Chapter 7 and 8	Quiz 5 in class: <i>(Covers 10/2 and</i> <i>10/7 material)</i> Assignment due: <i>Data Camp:</i> <i>Hypothesis Testing</i> <i>in R (10/19 @</i> 11:59pm)
<i>Midterm Preparation</i>	10/21	Come with questions!	
Midterm!!!!	10/23	MIDTERM	
<i>Testing of Means</i>	10/28	Required: - SU Chapter 10 and 11	
<i>Testing of Means</i>	10/30	Required: - SU Chapter 10 and 11	Assignment due: <i>Lab 1 (11/2 @</i> 11:59pm)
<i>Covariance, Correlation, Regression</i>	11/4	Required: - SU Chapter 12 - QRM Chapter 7 and 10	
<i>Covariance, Correlation, Regression</i>	11/6	Required: - SU Chapter 12 - QRM Chapter 7 and 10	Assignment due: <i>Lab 2 (11/9 @</i> 11:59pm)
<i>Pulling it all together, other statistical tests and concepts</i>	11/11	Required: - SU Chapter 12 - QRM Chapter 7	

<i>Pulling it all together, other statistical tests and concepts</i>	11/11	Required: <ul style="list-style-type: none"> - SU Chapter 12 - QRM Chapter 7 	Assignment due: <i>Lab 3 (11/16 @ 11:59pm)</i>
<i>Pulling it all together, other statistical tests and concepts</i>	11/18	Required: <ul style="list-style-type: none"> - SU Chapter 12 - QRM Chapter 7 	
<i>Pulling it all together, other statistical tests and concepts</i>	11/20	Required: <ul style="list-style-type: none"> - SU Chapter 12 - QRM Chapter 7 	Assignment due: <i>Lab 4 (11/23 @ 11:59pm)</i>
	11/25	THANKSGIVING BREAK	
	11/27	THANKSGIVING BREAK	
<i>Research ethics & Consuming/Writing political science research</i>	12/2	Required: <ul style="list-style-type: none"> • Writing in Political Science • How to Read Political Science Research • https://news.umich.edu/economist-retweets-boost-visibility-outcomes-for-doctoral-job-seekers/ • Social Media and Job Market Success: A Field Experiment on Twitter (also on Canvas) 	
<i>Peer review/ Data literacy/ Cleaning data</i>	12/4	Required: <ul style="list-style-type: none"> • How to Peer Review • A Guide to Peer Reviewing Journal Articles • Beware the dangers of data <ul style="list-style-type: none"> - The Economist (On Canvas) • R for Political Science 	Assignment(s) due: <i>Lab 5 (12/7 @ 11:59pm)</i> <i>Article review (12/7 @ 11:59pm)</i>

		<ul style="list-style-type: none"> • Data Cleaning Techniques <p>For assignment:</p> <ul style="list-style-type: none"> - Article review (On canvas under article review tab) 	
<i>Final Exam Preparation</i>	12/9	Come with questions!	Extra credit due: Submit course evaluations (over 80% of course submission by 12/8 @ 11:59)
<i>Final Exam Preparation</i>	12/11	NO CLASS - EXAM PREP	
<i>Final Exam!!!!</i>	12/17	<u>W 4:30 - 6:30 pm Burton Hall 208</u>	

Mental Health Support Services:

Support is available for any student experiencing mental health issues that are impacting their academic success. Students can either be seen at the University Counseling Center (UCC) located on the second floor of Goddard Health Center or receive 24/7/365 crisis support from a licensed mental health provider through [TELUS Health](#). To schedule an appointment or receive more information about mental health resources at OU please call the UCC at 405-325-2911 or visit [University Counseling Center](#). The UCC is located at 620 Elm Ave., Room 201, Norman, OK 73019.

Title IX Resources and Reporting Requirement:

The University of Oklahoma faculty are committed to creating a safe learning environment for all members of our community, free from gender and sex-based discrimination, including sexual harassment, domestic and dating violence, sexual assault, and stalking, in accordance with Title IX. There are resources available to those impacted, including: speaking with someone confidentially about your options, medical attention, counseling, reporting, academic support, and safety plans. If you have (or someone you know has) experienced any form of sex or gender-based discrimination or violence and wish to speak with someone confidentially, please contact [OU Advocates](#) (available 24/7 at 405-615-0013) or [University Counseling Center](#) (M-F 8 a.m. to 5 p.m. at 405-325-2911)

Because the University of Oklahoma is committed to the safety of you and other students, and because of our Title IX obligations, I, as well as other faculty, Graduate Assistants, and Teaching Assistants, are mandatory reporters. This means that we are obligated to report gender-based violence that has been disclosed to us to the Institutional Equity Office. This means that we are obligated to report gender-based violence that has been disclosed to us to the Institutional Equity Office. This includes disclosures that occur in: class discussion, writing assignments, discussion boards, emails and during Student/Office Hours. You may also choose to report directly to the Institutional Equity Office. After a report is filed, the Title IX Coordinator will reach out to provide resources, support, and information and the reported information will remain private. For more information regarding the University's Title IX Grievance procedures, reporting, or support measures, please visit [Institutional Equity Office](#) at 405-325-3546.

Reasonable Accommodation Policy:

The University of Oklahoma (OU) is committed to the goal of achieving equal educational opportunity and full educational participation for students with disabilities. If you have already established reasonable accommodations with the Accessibility and Disability Resource Center (ADRC), please [submit your semester accommodation request through the ADRC](#) as soon as possible and contact me privately, so that we have adequate time to arrange your approved academic accommodations.

If you have not yet established services through ADRC, but have a documented disability and require accommodations, please complete [ADRC's pre-registration form](#) to begin the registration process. ADRC facilitates the interactive process that establishes reasonable accommodations for students at OU. For more information on ADRC registration procedures, please review their [Register with the ADRC](#) web page. You may also contact them at (405)325-3852 or adrc@ou.edu, or visit www.ou.edu/adrc for more information.

Note: disabilities may include, but are not limited to, mental health, chronic health, physical, vision, hearing, learning and attention disabilities, pregnancy-related. ADRC can also support students experiencing temporary medical conditions.

Religious Observance:

It is the policy of the University to excuse the absences of students that result from religious observances and to reschedule examinations and additional required classwork that may fall on religious holidays, without penalty. [\[See Faculty Handbook 3.15.2\]](#)

Adjustments for Pregnancy/Childbirth Related Issues:

Should you need modifications or adjustments to your course requirements because of documented pregnancy-related or childbirth-related issues, please contact the Accessibility and Disability Resource Center at 405/325-3852 and/or the Institutional Equity Office at 405/325-3546 as soon as possible. Also, see the Institutional Equity Office [FAO on Pregnant and Parenting Students' Rights](#) for answers to commonly asked questions.

Final Exam Preparation Period

Pre-finals week will be defined as the seven calendar days before the first day of finals. Faculty may cover new course material throughout this week. For specific provisions of the policy please refer to OU's [Final Exam Preparation Period policy](#).

Emergency Protocol:

During an emergency, there are official university [procedures](#) that will maximize your safety.

Severe Weather: If you receive an OU Alert to seek refuge or hear a tornado siren that signals severe weather.

1. **Look** for severe weather refuge location maps located inside most OU buildings near the entrances.
2. **Seek** refuge inside a building. Do not leave one building to seek shelter in another building that you deem safer. If outside, get into the nearest building.
3. **Go** to the building's severe weather refuge location. If you do not know where that is, go to the lowest level possible and seek refuge in an innermost room. Avoid outside doors and windows.
4. **Get in, Get Down, Cover Up**
5. **Wait** for official notice to resume normal activities.

Additional [Weather Safety Information](#) is available through the Department of Campus Safety.

Armed Subject/Campus Intruder:

If you receive an OU Alert to shelter-in-place due to an active shooter or armed intruder situation or you hear what you perceive to be gunshots:

1. **Run:** If you believe you can get out of the area WITHOUT encountering the armed individual, move quickly towards the nearest building exit, move away from the building, and call 911.
2. **Hide:** If you cannot flee, move to an area that can be locked or barricaded, turn off lights, silence devices, spread out, and formulate a plan of attack if the shooter enters the room.
3. **Fight:** As a last resort fight to defend yourself.

For more information, visit [OU's Active Shooter page](#).

[Shots Fired on Campus Procedure – Video](#)

Fire Alarm/General Emergency:

If you receive an OU Alert that there is danger inside or near the building, or the fire alarm inside the building activates:

1. *LEAVE* the building. Do not use the elevators.
2. *KNOW* at least two building exits
3. *ASSIST* those that may need help
4. *PROCEED* to the emergency assembly area
5. *ONCE safely outside, NOTIFY first responders of anyone that may still be inside building due to mobility issues.*
6. *WAIT* for official notice before attempting to re-enter the building.

[OU Fire Safety on Campus](#)

Office of Access and Opportunity's Belonging Statement

Why You Belong at the University of Oklahoma: The University of Oklahoma fosters an inclusive culture of respect and civility, belonging, and access, which are essential to our collective pursuit of excellence and our determination to change lives. The unique talents, perspectives, and experiences of our community enrich the learning, and working environment at OU, inspiring us to harness our innovation, creativity, and collaboration for the advancement of people everywhere.

Course Reflection Survey

You'll receive a Course Reflection Survey at the end of each semester for each course that you are enrolled in. I strongly encourage you to complete this survey. Your feedback can help me adjust my class for future semesters to help other students be successful. Your feedback is confidential and I will only receive it after final grades are due. Course Reflection Survey results may also factor into teaching evaluations and annual performance reviews and are shared with department and program chairs.

Copyright Statement, for in-person or online courses (optional)

Sessions of this course may be recorded or live-streamed. These recordings are the intellectual property of the individual faculty member and may not be shared or reproduced without the explicit, written consent of the faculty member. In addition, privacy rights of others such as students, guest lecturers, and providers of copyrighted material displayed in the recording may be of concern. Students may not share any course recordings with individuals not enrolled in the class or upload them to any other online environment.