POLS 4150: Research Methods in Political Science

University of Georgia Spring 2020 Tu, Th, 2:00 - 3:15 PM, Baldwin 102 Professor Anastasopoulos

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Course Description

This course is an introduction to statistical reasoning and thinking applied to understanding the political world. The tools that we will learn in this course will help you not foster a better understanding of problems in political science and politics more broadly, but will help clarify the way that you think and reason through problems where data is involved. The topics that we will cover include: research design, measurement, causal inference and understanding how we measure and interpret relationships between events and concepts.

Required Text and Readings

The required text for the course will be:

Kellstedt, Paul M., and Guy D. Whitten. 2013. *The Fundamentals of Political Science Research*, 3rd. New York: Cambridge University Press.

There will also be additional readings available on the course webpage.

Grading

Your course grade will be calculated as follows:

Attendance/Participation 5% R Labs 5% Problem Sets 10% Group project 15% Midterm exam 30% Final exam 35%

Letter Grade	Score (% Correct)
A	90-100%
A-	88-89%
B+	84-87%
В	80-83%
В-	78-79%
C+	74-77%
С	67-73%
D	60-66
F	59 and below

Attendance is mandatory and class participation and class discussion is an essential part of this class.

R Labs

Throughout the semester, we will devote about 30 minutes of class time each week to getting acquainted with the statistical package **R**. During these labs, I will introduce a programming topic and then ask you to complete a short assignment in breakout groups of 3 or fewer students.

In preparation for the ${\bf R}$ Labs, please download and install:

- 1) The latest version of R: <u>https://cloud.r-project.org/</u>
- 2) The latest version of **RStudio**: <u>https://www.rstudio.com/products/rstudio/download/</u>.

Problem Sets

Your final grade will be based on a number of problem sets with assignments provided one week before the due date. These assignments will be taken from the required text. They must be turned in on time and late assignments will receive a grade of zero in the absence of a university-approved excuse.

UNLESS SPECIFIED OTHERWISE BY ME, PROBLEM SETS ARE DUE **BEFORE** CLASS (1:59PM) ON THE DAY THAT THEY ARE DUE

Exams

There will be two exams for the class: an in-class midterm on **Tuesday, February 25th** and a final on **Tuesday, May 5th from 3:30-6:30 PM**. The final will only cover material from the midterm on but will require that you understand and utilize concepts from earlier material.

Exams will be roughly ½ multiple choice and ½ short answer questions. You will need a simple calculator that can do addition, multiplication and division for both the midterm and the final.

Group Research Project and Debates

<u>Overview</u>

The group research project will require you to work in groups of 2-4 on one of a number of current issues being considered by the Georgia state legislature I will provide to you during the first two weeks of class.

For this project the **GROUP** will choose the topic that they want to work on but **I** will choose the position that the group will take.

When choosing topics, please keep in mind that you <u>may have to argue for a position</u> <u>that you do not agree with.</u> Here is an example of topics that students had the opportunity to choose from in the past:

https://docs.google.com/spreadsheets/d/1bEKoDKFWS7ldrkll4EX1XU1S7ZQBASLMc aVqBualv5l/edit?usp=sharing

Deliverables

The group research project will require you to apply the methods that you will learn in the class to a policy problem. There are two main deliverables for the project:

- 1. Brief, 1 page maximum, bullet points of the data and argument that you plan to make, due **Thursday, March 19th.**
- 2. A 5-10 page report, due Tuesday, April 28th.
- 3. A 15 minute presentation of your assigned position and argument.

The presentations will be follow a debate format similar to that of the Intelligence Squared debates: <u>https://www.intelligencesquaredus.org/</u>. These debates will take place on the last two dates of our class:

- Thursday, April 23rd.
- Tuesday, April 28th.

More information about these projects will be posted on the ELC.

Each of these debates WILL HAVE A WINNING GROUP.

Key Dates

- → February 25: Midterm
- → March 19th: Group project outline due.
- → April 28th: Group research project reports due.
- → April 23rd & 28th: Debate presentations for group research projects.
- → May 5th, 3:30-6:30, Baldwin 102: Final Exam

Course Calendar

I reserve the right to change the calendar to ensure that we spend enough time on each topic. If changes become necessary, they will be announced in class.

Week 1:

Course introduction • K&W, ch. 1

R Lab 1 1/9: Introduction to R.

Read part 1 of this tutorial
<u>http://web.cs.ucla.edu/~gulzar/rstudio/basic-tutorial.html</u>

Week 2:

Theories and hypotheses • K&W, ch. 2

Week 3:

Causality • K&W, ch. 3

Gerber, A.S., Green, D.P. and Larimer, C.W., 2008. <u>Social pressure and voter turnout:</u> <u>Evidence from a large-scale eld experiment</u>. American Political Science Review, 102(01), pp.33-48.

R Lab 2 1/30: Loading and manipulating data.

• Part 2 of tutorial: http://web.cs.ucla.edu/~gulzar/rstudio/basic-tutorial.html

Problem Set 1 Released 1/30

Week 4:

Research design • K&W, ch. 4

Putnam, R.D., 2007. *E pluribus unum: Diversity and community in the twenty first century the 2006 Johan Skytte Prize Lecture*. Scandinavian political studies, 30(2), pp.137-174.

R Lab 3 2/7: Data visualization.

• Part 4 of tutorial: http://web.cs.ucla.edu/~gulzar/rstudio/basic-tutorial.html

Problem Set 1 Due 2/6

Week 5:

Measurement and descriptive statistics • K&W, ch. 5

Galton, Francis. 1907. The Wisdom of Crowds. Nature. (available on the ELC)

R Lab 4 2/14: Descriptive statistics.

• Part 3 of tutorial: <u>http://web.cs.ucla.edu/~gulzar/rstudio/basic-tutorial.html</u>

Problem Set 2 Released 2/13

Week 6: Getting to Know Your Data: Variables Types • K&W, ch. 6

R Lab 5 2/21: Categorical and continuous variables.

Problem Set 2 Due 2/20

Week 7 February 26 and 28:

Midterm and Probability theory and statistical inference • K&W, ch. 7

Problem Set 3 Released 2/27

Week 8 March 5 and 7: Probability and statistical inference continued • K&W, ch. 7

R Lab 6 3/5: Populations and samples.

Problem Set 3 Due 3/5

SPRING BREAK NO CLASSES March 10 and 12

Week 9: Bivariate hypothesis testing • K&W, ch. 8

R Lab 7 3/19: Bivariate hypothesis tests.

Problem Set 4 Released 3/19

GROUP PROJECT OUTLINE DUE 3/19

Week 10: Two variable regression models • K&W, ch. 9

R Lab 8 3/26: Two variable regression.

Problem Set 4 Due 3/26

Week 11 April 2 and 4: Two variable regression models continued • K&W, ch. 9

Problem Set 5 Released 4/2

Week 12: Multiple regression basics • K&W, ch. 10

R Lab 9 4/9: Multiple regression.

Problem Set 5 Due 4/9

Week 13: Multiple regression: advanced applications • K&W, ch. 11

Problem Set 6 Released 4/16

Week 14 April 23, and 28: Group project research presentations debates/

Problem Set 6 Due 4/28

May 5th: FINAL EXAM

Statement about Students with Disabilities

Students with special needs that require accommodation should notify me and the Office for Disability Services in the first two weeks of the course so appropriate arrangements can be made. All information and documentation of special needs is confidential.

Statement about Plagiarism and Academic Dishonesty

Students are responsible for maintaining the highest standards of honesty and integrity in every phase of their academic careers. The penalties for academic dishonesty are severe and ignorance of the policy is not an acceptable defense. See also https://ovpi.uga.edu/academic-honesty.