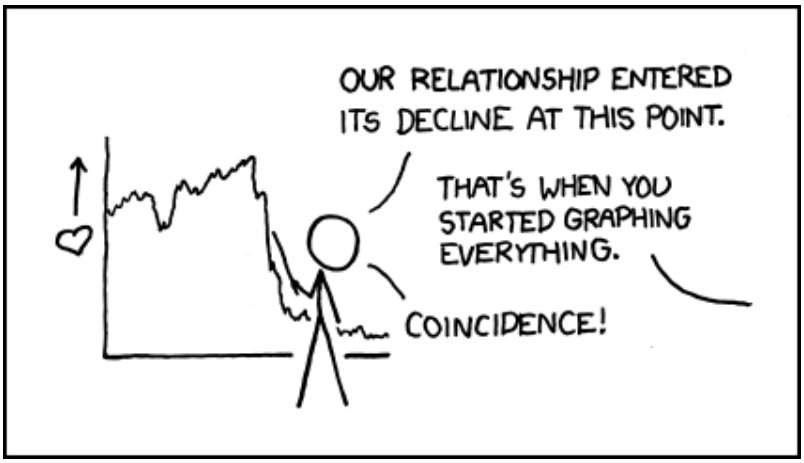
POLS 3230: Political Analysis in R

Fall 2021

Professor:	Joe Ornstein	**Time:**	MWF 1:50 – 2:40pm
Email:	jornstein@uga.edu	**Place:**	101D Baldwin Hall
Website:	https://joeornstein.github.io/pols-3230/		

In this course, you will learn the fundamentals of working with data using R, a programming language widely used among professional data scientists and academic researchers. You'll learn how to write code, explore new datasets, build visualizations, and think carefully about what conclusions you can and cannot draw from data.



Course Objectives

By the end of this course, you will be able to:

- Write R scripts to import, tidy, and summarize datasets
- Create beautiful and informative data visualizations
- Draw thoughtful conclusions from data
- Organize your work so that it is transparent and reproducible

Readings

Before each class session, I will assign a reading that walks you through a new R programming skill. I will expect you to read and annotate each assignment using Hypothesis. All the readings will be available free online (including the books listed below!), but if you're the type of person who enjoys reading a hard copy, here is a list of books you can purchase:

- Wickham, H., & Grolemund, G. (2016). *R For Data Science: import, tidy, transform, visualize, and model data.* O'Reilly Media, Inc.

- Wilke, Clause O. (2019). *Fundamentals of Data Visualization: A Primer on Making Informative and Compelling Figures*
- Healy, Kieran (2018). *Data Visualization: A Practical Introduction.* Princeton University Press.

Assignments & Grading

To earn your course grade, I will expect the following:

- **Reading (10%)**: Read all the assigned texts, and actively contribute to the annotated reading discussions. I will grade this on a four-point scale (check-plus, check, check-minus, frowny face) based on how regularly you post.
- **Quizzes (30%)**: There will be three in-class quizzes throughout the semester. I will give you a piece of code with a bunch of errors in it, and your job will be to fix the code so that it works. Points assigned based on how many errors you spot and fix. For Fall 2021, the quiz dates will be **September 15**, **October 13**, and **November 17**.
- **Team Projects (40%):** Every day in class, you will work in teams to explore some dataset. Roughly once per week, your team will submit a report on your findings. Reports that are error-free, reproducible, thoughtful, and visually appealing will earn full credit.
- **Final Project (20%):** To cap off the semester, you will create an original data visualization that explores a topic of your choice. Projects that are error-free, reproducible, thoughtful, and visually appealing will earn full credit, and my 3-5 favorites will receive a prize (your dataviz on a poster or coffee mug)! You can find a copy of the grading rubric here.

Office Hours

I will be available for meetings every Wednesday before and after class, and you can sign up for 15 minute appointments here. My office is Baldwin 304C, but if you prefer Zoom let me know and I'll send you a link.

Tentative Course Outline

Moltke the Elder writes that no battle plan survives first contact with the enemy. The same is true for course outlines. We may need to be flexible, and deviate from the plan if some topics require more or less attention, or we think of something completely unexpected that we want to do, and it takes up a few weeks. Caveats aside, here is what I have planned!

Week 1: Getting Started

Pre-Class Survey, Overcoming Fear, Setting up Software

Week 2: Intro To Data Visualization

ggplot2, The Grammar of Graphics, Design Principles, Scatterplots

Week 3: Fancier Data Visualizations

Lines, Facets, Histograms, Distributions, Color, Themes

Weeks 4-6: Tidying Messy Data

Making New Variables, Grouping, Summarizing, Importing Filtering, Merging

Week 7-8: Space

Working with geographic data, Drawing maps

Week 9-10: Time

Working with dates, Difference-in-difference

Weeks 11-12: Text As Data

Strings, Twitter, Sentiment Analysis

Week 13-15: Final Projects

Work on whatever you want, then show it off

Academic Honesty

Remember that when you joined the University of Georgia community, you agreed to abide by a code of conduct outlined in the academic honesty policy called *A Culture of Honesty*. Team projects may, of course, be completed in teams, but you may not consult other people for help on the quizzes, and I expect your final projects to be your original work.

Mental Health and Wellness Resources

- If you or someone you know needs assistance, you are encouraged to contact Student Care and Outreach in the Division of Student Affairs at 706-542-7774 or visit https://sco.uga.edu. They will help you navigate any difficult circumstances you may be facing by connecting you with the appropriate resources or services.
- UGA has several resources for a student seeking mental health services or crisis support.
- If you need help managing stress anxiety, relationships, etc., please visit BeWellUGA for a list of FREE workshops, classes, mentoring, and health coaching led by licensed clinicians and health educators in the University Health Center.
- Additional resources can be accessed through the UGA App.