UNIVERSITY OF GEORGIA

SYLLABUS

POLS 3230 - 61918
Political Analysis in R

Spring 20XX
X XXX-XXX
Baldwin XXX

Course Description and Prerequisites

In this course, students will learn data science using the statistical programming language R, with a focus on political science applications. By the end of the course, students will be able to work with large datasets, build beautiful visualizations, make predictions, and conduct statistical analyses.

Prerequisites: POLS 1101 or POLS 1105H or POLS 1101E

Learning Outcomes or Course Objectives

Students will be able to:
Understand the basics of computer programming using R as a learning platform
Manage large, messy political datasets using the tools in R's tidyverse package
Create striking, informative visualizations of political data using R's ggplot2 package

Instructor Information

Garrett Vande Kamp
garrettvandekamp@uga.edu

Office Hours: X X-X
Baldwin 409

Textbook and/or Resource Material

Textbooks:
Hands-On Programming with R, Garrett Grolemund. https://rstudio-education.github.io/hopr/index.html
R for Data Science, 1st edition. Hadley Wickham and Garrett Grolemund. https://r4ds.had.co.nz/index.html
Fundamentals of Data Visualization, Claus Wilke. https://clauswilke.com/dataviz/
R Graphics Cookbook, 2nd edition. Winston Chang. https://r-graphics.org/
ggplot2: Elegant Graphics for Data Visualization, 3rd edition. Hadley Wickham, Danielle Navarro, and Thomas Lin Pedersen. https://ggplot2-book.org/

Software:
R. https://cran.r-project.org/
R Studio. https://rstudio.com/products/rstudio/

Attendance Policy

This is an in-person class. Attendance is mandatory and will be taken in class for the instructor's records through TopHat. Any student who misses more than 1/3 of class sessions will automatically fail the class. To download TopHat, visit https://ctl.uga.edu/learning-technologies/student-response-systems/

Make-up opportunities will only be provided for students with unforeseen, unavoidable absences. These opportunities will not excuse absences; such absences will still count as a missed class session that can trigger automatic failure of the class. Unforeseen and unavoidable absences will require documentation for verification.

In the absence of written authorization from the UGA Disability Resource Center, students may not make a video or audio recording of any aspect of this course. In the event an authorization, the student and faculty must come to a written agreement that ensures recordings will only be used for personal academic use, not to violate the privacy of those in attendance, nor to monetize off the content of the lectures. Violation of these terms may subject them to discipline under the Student Code of Conduct or subject them to liability under copyright laws.

Grading Policies

Weekly Projects	40%
Final Project	40%
Participation	20%

Assignments will receive due dates. Unless otherwise specified in writing, all assignments that are due on scheduled class day will be due before class. These due dates are mandatory. Assignments turned in after class but on the due date will be subject to a 10% grade reduction. Late assignments after the due date will be accepted with a 15% grade reduction for each day it is late.

All assignments should include a copy of the code used to complete the assignment, in addition to any other materials required to complete the assignment. Submissions that do not include all necessary materials will be considered late and be subject to additional penalties.

Assignments that are found to be academically dishonest will receive a 0%. This includes plagiarism, lying, tampering, and giving or receiving unauthorized assistance. For more information, see https://honesty.uga.edu/

The use of Generative Artificial Intelligence tools for coding will not be an example of academic dishonesty. All other uses of Generative Artificial Intelligence will be considered academically dishonest.

"I will be academically honest in all of my academic work and will not tolerate academic dishonesty of others." A Culture of Honesty, the University's policy and procedures for handling cases of suspected dishonesty, can be found at honesty.uga.edu. Every course syllabus should include the instructor's expectations related to academic honesty.

Weekly Projects: Students will be grouped into project teams to complete weekly projects designed to reinforce the skills learned in the past week. The projects will be given on the first day of class each week and are due one week later. These projects are designed to be worked on both during the in-class breakout sessions as well as after-class as homework. Team members are expected to discuss the application of course content to the projects, clarify any uncertainty concerning a topic among team members, and assist in debugging procedures. At the beginning of the semester, weekly projects will consist of a single set of tasks that team members collectively contribute to completing; all team members will be evaluated by a single project submission. As the semester progresses, weekly projects will sometimes consist of a set of tasks for each team member to complete individually; each team member will be evaluated by their own unique project submission rather than a group submission.

Final Project: Students will be required to write a research paper on a topic of their choice. It will be due on the day and time of the final exam and take the place of the final exam. The paper will analyze an issue of political importance and engage in exploratory data analysis in order to learn about that issue. As part of their research paper, they will need to collect data relevant to their topic, clean data in to make it easy to analyze, and visualize basic relationships that are relevant to the project. Students will be required to submit their data and code alongside the final paper. Unlike the weekly project, each student is required to submit a unique, personal project of their own creation. Students are encouraged to seek help from their team members for brainstorming, proofreading, and debugging.

Participation: Students may occasionally be given assignments that are outside the scope of the above required assignments. These assignments will fall under a student’s participation grade.

Students who largely fail to contribute to weekly projects lose points on their participation grade. Students who display persistent behavior issues, either during class periods or when meeting with their assignment team, will also be docked on their participation grade.

Grading Scale

A = 90-100
B = 80-90
C = 70-80
D = 60-70
F = <60

Major Class Dates

Add/Drop Period	Monday-Friday, January XX-XX
MLK Jr. Day (No classes)	Monday, January XX
Spring Break (No classes)	Monday-Friday, March XX-XX
Withdrawal Deadline	Thursday, April X
Last Day of Class	Friday, April XX

Disability Accommodations

If you plan to request accommodations for a disability, please register with the Accessibility and Testing (A&T). A&T can be reached by visiting Clark Howell Hall, by calling 706-542-8719 (voice), or by visiting https://accessibility.uga.edu/

UGA Well-Being Resources

UGA Well-being Resources promote student success by cultivating a culture that supports a more active, healthy, and engaged student community.

Anyone needing assistance is encouraged to contact Student Care & Outreach (SCO) in the Division of Student Affairs at 706-542-8479 or visit sco.uga.edu. Student Care & Outreach helps students navigate difficult circumstances by connecting them with the most appropriate resources or services. They also administer the Embark@UGA program which supports students experiencing, or who have experienced, homelessness, foster care, or housing insecurity.

UGA provides both clinical and non-clinical options to support student well-being and mental health, any time, any place. Whether on campus, or studying from home or abroad, UGA Well-being Resources are here to help.

- *Well-being Resources: well-being.uga.edu*
- *Student Care and Outreach: sco.uga.edu*
- *University Health Center: healthcenter.uga.edu*
- *Counseling and Psychiatric Services: caps.uga.edu or CAPS 24/7 crisis support at 706-542-2273*
- *Health Promotion/ Fontaine Center: healthpromotion.uga.edu*
- *Accessibility and Testing: accessibility.uga.edu*

Additional information, including free digital well-being resources, can be accessed through the UGA app or by visiting https://well-being.uga.edu.

Syllabus as a Contract

This syllabus is a contract between the professor and the individual student. Every student in this class receives an identical syllabus; therefore, every student in this class will be taught and evaluated in the same manner. This syllabus is unique to this class; therefore, the students in this class may not be taught and evaluated as students in other sections of this class, past or present, even if taught by the same professor.

A Word of Thanks

Teaching is a difficult task, and even the creation of a course syllabus is difficult. I appreciate the help of all of my colleagues who have helped me along the way. I am also grateful to the students of previous courses whose feedback has helped me improve this syllabus.

That being said, this syllabus and the course materials referenced in it is the intellectual property of the instructor and subject to copyright law. Do not reproduce any course materials without explicit written permission. This includes lecture material; all recordings are prohibited.

Expected Course Calendar

The course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary.

Unit 1: Computer Programming

Week 1: Course Introduction

Week 2: Introduction to R Programming
HOPR Part 1

Week 3: Datasets in R
HOPR Part 2

Unit 2: Data Exploration

Week 4: Introduction to Data Visualization
R4DS Chap 3

Week 5: Descriptive Statistics
R4DS Chap 5

Unit 3: Data Management

Week 6: Importing Datasets
R4DS Chaps 10-11

Week 7: Managing Datasets
R4DS Chaps 12-13

Week 8: Advanced Data Types
R4DS Chaps 14-16

Week 9: Communicating with Data
Readings TBD

Unit 4: Data Visualization

Weeks 10 and 11: Types of Data Visualizations
FDV Part 1
Graphics Cookbook, as assigned

Weeks 12 and 13: Principles of Data Visualization
FDV Part 2
Graphics Cookbook, as assigned

Unit 5: Beyond the Fundamentals

Weeks 14 Forward: Flex Weeks