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|  | SYLLABUS |
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| POLS 3230 | Political Analysis in R |
| Spring 2022 | MWF 9:10-10:00AM  |
| Baldwin 101D |  |
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| **Course Description and Prerequisites** |
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| 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. |
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| **Learning Outcomes or Course Objectives** |
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| Students will be able to:Understand the basics of computer programming using R as a learning platformManage large, messy political datasets using the tools in R’s tidyverse packageCreate striking, informative visualizations of political data using R’s ggplot2 package  |
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| **Instructor Information** |
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| Garrett Vande Kamp |  |
| garrettvandekamp@uga.edu |  |
| Baldwin 409 |  |
| Tuesday 10:00am-Noon |  |
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| **Textbook and/or Resource Material** |
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| Textbooks*:* *Hands-On Programming with R*, Garrett Grolemund. <https://rstudio-education.github.io/hopr/index.html>*R for Data Science,* 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/>Software:R. <https://cran.r-project.org/>R Studio. <https://rstudio.com/products/rstudio/>The class is designed such that a free version of all required material is available in some form or fashion, though this cannot be guaranteed. The software can be downloaded for free, while textbooks can be viewed online for free. Hard copies of the textbooks are available for purchase though the web. |
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| **Attendance Policy** |
| The class will be taught in an in-person format, with exceptions occasionally made if the professor is travelling. Attendance is mandatory and will be taken in class for the instructor’s records. Attendance will inform student’s participation grades.Make-up opportunities will only be provided for students with unforeseen, unavoidable absences. Foreseen and avoidable absences can schedule earlier testing, if necessary. Unforeseen and unavoidable absences will require documentation for verification. COVID-19 does not merit any special exceptions to this policy. |
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| **Grading Policies** |
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| 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.**Weekly Projects**: Students will be assigned into project teams in order to complete weekly projects designed to reinforce the skills learned in the past week. These projects are designed to be worked on both during the in-class breakout sessions as well as after-class homework. Team members are expected to discuss the application of course content to the projects, clarify any uncertainty concerning a topic among team members, contribute to the code used to complete the weekly projects, and assist in debugging procedures. Teams will submit one assignment to represent the entire group’s work. Students should cooperate with members within their own team on weekly projects, but not with members of other teams.**Final Project**: Students will be required to write a research paper on a topic of their choice. 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.At the end of the semester, students will be asked about the group dynamics of their project team and each individual’s overall contribution to it. Students who largely fail to contribute to weekly projects lose points on their participation grade. Students who display persistent behavior issues within their assignment team will also be docked on their participation grade. |
| **Grading Scale** |
| A = 90-100B = 80-89C = 70-79D = 60-69F = <60 |
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| **Major Class Dates** |
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| Monday, January 10: Classes beginMonday-Friday, January 10-14: Add/Drop PeriodMonday, January 17: MLK Jr. DayMarch 7-11: Spring BreakThursday, March 24: Withdrawal DeadlineWednesday, May 11: Final Exam |
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| **Mental Health and Wellness Resources** |
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| * *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*](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 (*[*https://www.uhs.uga.edu/bewelluga/bewelluga*](https://www.uhs.uga.edu/bewelluga/bewelluga)*) or crisis support (*[*https://www.uhs.uga.edu/info/emergencies*](https://www.uhs.uga.edu/info/emergencies)*).*
* *If you need help managing stress anxiety, relationships, etc., please visit BeWellUGA (*[*https://www.uhs.uga.edu/bewelluga/bewelluga*](https://www.uhs.uga.edu/bewelluga/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.*
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| **Coronavirus Information for Students** |
| **UGA adheres to guidance from the University System of Georgia and the recommendations from Georgia Department of Public Health (DPH) related to quarantine and isolation. Since this may be updated periodically, we encourage you to review the latest guidance** [**here**](https://dph.georgia.gov/dph-covid-19-guidance)**. The following information is based on guidance last updated on December 29, 2021.** **Face coverings:** Following guidance from the University System of Georgia, face coverings are recommended for all individuals while inside campus facilities. **How can I obtain the COVID-19 vaccine?**University Health Center is scheduling appointments for students through the UHC Patient Portal (<https://patientportal.uhs.uga.edu/login_dualauthentication.aspx>).  Learn more here – <https://www.uhs.uga.edu/healthtopics/covid-vaccine>.The Georgia Department of Health, pharmacy chains and local providers also offer the COVID-19 vaccine at no cost to you. To find a COVID-19 vaccination location near you, please go to:  <https://georgia.gov/covid-vaccine>. In addition, the University System of Georgia has made COVID-19 vaccines available at 15 campuses statewide and you can locate one here: <https://www.usg.edu/vaccination> **What do I do if I have COVID-19 symptoms?** Students showing COVID-19 symptoms should self-isolate and get tested. You can schedule an appointment with the University Health Center by calling 706-542-1162 (Monday-Friday, 8 a.m.-5p.m.). Please DO NOT walk-in. For emergencies and after-hours care, see <https://www.uhs.uga.edu/info/emergencies>.**What do I do if I test positive for COVID-19? (Isolation guidance)**If you test positive for COVID-19 at any time, either through a PCR test, an Antigen test, or a home test kit, you are **required to report it** through the [DawgCheck Test Reporting Survey](https://dawgcheck.uga.edu/). Follow the instructions provided to you when you report your positive test result in DawgCheck.As of December 29, 2021, when an individual receive a positive COVID-19 test: Everyone, **regardless of vaccination status,** should:* Stay home for 5 days.
* If you have symptoms or your symptoms are resolving after 5 days, you can leave your house and return to class.
* Continue to wear a mask around others for 5 additional days.

**What do I do if I have been exposed to COVID-19? (Quarantine guidance)**If you have been exposed (within 6 feet for a cumulative total of 15 minutes or more over a 24-hour period – unmasked\*\*) to someone with COVID-19 or to someone with a positive COVID-19 test and you are:* Boosted, or have become fully vaccinated within the last 6 months (Moderna or Pfizer vaccine) or within the last 2 months (J&J vaccine)
	+ You do not need to quarantine at home and may come to class.
	+ You should wear a mask around others for 10 days.
	+ If possible, get tested on day 5.
	+ If you develop symptoms, get tested and isolate at home until test results are received, then proceed in accordance with the test results.
* Unvaccinated, or became fully vaccinated more than 6 months ago (Moderna or Pfizer vaccine) or more than 2 months ago (J&J vaccine) and have not received a booster:
	+ You must quarantine at home for 5 days. After that you may return to class but continue to wear a mask around others for 5 additional days.
	+ If possible, get tested on day 5.
	+ If you develop symptoms, get tested and isolate at home until test results are received, then proceed in accordance with the test results.

\*\* “Masked-to-masked” encounters are not currently considered an exposure; this type of interaction would not warrant quarantine.You should report the need to quarantine on [DawgCheck](https://dawgcheck.uga.edu/) (<https://dawgcheck.uga.edu/>), and communicate directly with your faculty to coordinate your coursework while in quarantine. If you need additional help, reach out to Student Care and Outreach (sco@uga.edu) for assistance. **Well-being, mental health, and student support**If you or someone you know needs assistance, you are encouraged to contact Student Care & 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 to support your well-being and mental health: <https://well-being.uga.edu/> Counseling and Psychiatric Services (CAPS) is your go-to, on-campus resource for emotional, social and behavioral-health support: <https://caps.uga.edu/>, TAO Online Support (<https://caps.uga.edu/tao/>), 24/7 support at 706-542-2273. For crisis support: <https://healthcenter.uga.edu/emergencies/>.The University Health Center offers FREE workshops, classes, mentoring and health coaching led by licensed clinicians or health educators: <https://healthcenter.uga.edu/bewelluga/> **Monitoring conditions:**Note that the guidance referenced in this syllabus is subject to change based on recommendations from the Georgia Department of Public Health, the University System of Georgia, or the Governor’s Office. For the latest on UGA policy, you can visit [coronavirus.uga.edu](https://coronavirus.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. |
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| **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. |
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| **Expected Course Calendar**The syllabus is a general plan for the course; deviations announced to the class by the instructor may be required. |
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| **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 Part 1, as assigned**Week 5: Descriptive Statistics**R4DS Part 1, as assigned**Week 6: Communicating with Data**Readings TBD**Unit 3: Data Management****Week 7: Importing Datasets**R4DS Part 2, as assigned**Week 8: Managing Datasets**R4DS Part 2, as assigned**Week 9: Advanced Data Types**R4DS Part 2, as assigned**Unit 4: Data Visualization****Weeks 10 and 11: Types of Data Visualizations**FDV Part 1Graphics Cookbook, as assigned**Weeks 12 and 13: Principles of Data Visualization**FDV Part 2Graphics Cookbook, as assigned**Unit 5: Beyond the Fundamentals****Weeks 14 Forward: Flex Weeks** |