PADP7120: Data Applications in Public Administration

Spring 2022, Section 44502

Classroom: Gwinnett Campus Room 0118

Mondays 6:15PM-9:00PM

INSTRUCTOR

Dr. Alex Combs

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Office Location: Baldwin Hall 278

Office Hours: Calendly link on eLC

> "We should have aggressive and wild ambitions that are only anchored by plans, not by doubts."
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> - Stacey Abrams
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> "Plans are worthless, but planning is everything."
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> - Dwight D. Eisenhower

COURSE DESCRIPTION

Applications of data analysis techniques to problems in public management and policy. Special attention is devoted to instilling familiarity with software packages to solve public sector problems. Topics involve the entire data analysis workflow, including the collection and cleaning of data, description of data numerically and visually, and drawing conclusions from statistical inference using cross-tabulation, difference of means testing, and regression analysis.

COURSE OBJECTIVES

This course contributes toward the following MPA program competencies: 1) To participate in the Public Policy Process, 2) To analyze, synthesize, think critically, solve problems, and make decisions, and 3) Communicate with a diverse workforce and citizenry. By the conclusion of this course, students should be able to:

1. Analyze policy alternatives using quantitative tools to evaluate decisions and explain potential ramifications for diverse constituencies
2. Use various methods and analytical tools to analyze and interpret data to provide effective reasoning for decision making and policy creation
3. Concisely inform the public and other stakeholders of decision and initiatives through the presentation of data and research findings
4. Produce policy papers involving the synthesis of information, evaluation, and analysis of critical questions or problems currently facing the field of public administration and policy
5. Execute specific strategies to enhance equity within and representativeness of the public workforce to ensure all people with a government's jurisdiction are well served

TOPICAL OUTLINE

Data types and structures

Measurement validity & reliability

Data description

Data visualization

Regression analysis

Causation & bias

Sampling

Surveys & evaluations

Forecasting

Panel analysis

REQUIRED COURSE MATERIALS

There is a wealth of free material teaching statistics and statistical software. All required materials for this course are free. All readings and materials except software will be provided via eLC. Students who plan to use their own computers need to download the following software:

- R
- RStudio

 Written instructions for downloading R and RStudio are available on eLC. Video tutorials are easily accessible on YouTube.

COURSE POLICIES & ASSIGNMENTS

Disclaimer

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

Attendance & Late Work

Attendance is strongly encouraged but not required. In general, absences do not need to be excused. All graded assignments can be completed online without attending class meetings. However, multiple assignments are designed to be completed in class to lessen the workload, and class meetings will - in theory - facilitate successful completion of other assignments. Assignment deadlines will be enforced. Late work without any known, acceptable excuse will receive no credit. If circumstances arise that prevent you from completing work on time, let me know as soon as possible, and I will work with you to arrive at a solution that is as fair to you, me, and other students as possible.

R Chapters

Most weekly reading assignments will involve an R Chapter. Each R Chapter provides instructions on how to apply concepts and skills in R that are relevant to that week's topic, then asks you to answer a few practice questions. R Chapters will be graded pass/fail based on whether you submit a good faith effort prior to the class period to which the R Chapter was assigned. The primary purpose of R Chapters is to provide you an opportunity to self-evaluate your understanding of R. Once you upload your answers, sample answers will become available at R Chapter Answers (/d2l/common/dialogs/quickLink/quickLink.d2l?ou=2466552&type=content&rcode=usgq-20280318). You are encouraged to compare your answers to my answers prior to class. If your answers deviate from my own and you do not understand why, ask a question about it during class.

R Labs

Most class meetings will include a lab component that covers applied skills in R. I will provide instructions, prompts for you to practice the skill, and assistance when needing to troubleshoot. R Labs will be graded pass/fail. If you attend class and participate in the R Lab, you will receive full credit regardless of accuracy and completeness. If you choose not to attend class, you are welcome to complete R Labs for full credit if done accurately and uploaded to eLC by 12PM of the Wednesday following class.

Problem Sets

Students are expected to complete four problem sets during the semester. Problem sets will include a combination of conceptual and applied questions that require the use of R. Up to three students may work together on problem sets. Groups are encouraged to work together synchronously rather than remotely on separate parts. If you are worried about your capacity to learn R, I encourage you to partner with those who consider learning R a potential strength of theirs as long as all agree each member can make a sufficient contribution.

Exams

Students are expected to complete a midterm and final exam during the semester. The exams will focus entirely on concepts covered in the course, not use of R. The exams will evaluate students on their understanding of theory and correct practices regarding data description and inference, as well as their ability to interpret and communicate statistical information and make decisions.

DataCamp Chapters (Optional/Extra Credit)

Students of this course receive a free account to DataCamp (https://www.datacamp.com). DataCamp contains numerous interactive exercises that can help you build conceptual understanding of statistics and skills in R. The course schedule provides a list of DataCamp chapters that are relevant to the topics covered each week. The DataCamp chapters are optional but worth extra credit. To see how this extra credit will be applied, go here: DataCamp Chapter Logistics (/d2l/common/dialogs/quickLink/quickLink.d2l?ou=2466552&type=content&rcode=usgq-18629252).

Academic Honesty

As a University of Georgia student, you have agreed to abide by the University's academic honesty policy, "A Culture of Honesty," and the Student Honor Code. All academic work must meet the standards described in "A Culture of Honesty" found here (http://honesty.uga.edu/). The Academic Honesty Policy can be found here (https://honesty.uga.edu/Academic-Honesty-Policy/).

Accommodations Due to Disability

Students who seek special accommodations due to a disability should contact me during the first week of the semester or as soon as the need for the accommodation is discovered. I will work with the Disability Resource Center (706-542-8719, http://drc.uga.edu/ (http://drc.uga.edu/)) to provide appropriate accommodations.

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 (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) or crisis support (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) 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.

FERPA Notice

The Federal Family Educational Rights and Privacy Act (FERPA) grants students certain information privacy rights. See the registrar's explanation here (https://osas.franklin.uga.edu/ferpa-and-privacy). FERPA allows disclosure of directory information (name, address, telephone, email, date of birth, place of birth, major, activities, degrees, awards, prior schools), unless the following form (https://reg.uga.edu/_resources/documents/imported/FERPARequestForRestriction.pdf) is submitted to the Registrar's Office.

Inclusion and Identity

This class strives to promote a sense of community and a welcoming space for a diversity of ideas, perspectives, and experiences. All members of our classroom community, including all students and the instructor, should strive to respect one another's differences of identity, e.g., religion, race, ethnicity, sexual orientation, and gender. UGA's educational platform provides a roster of legal student names for the instructor. Students are

encouraged to reach out to the instructor early in the semester if they wish to be addressed by an alternate name or gender pronoun.

Prohibition on Recording Lectures

In the absence of written authorization from the UGA Disability Resource Center, students may not make a visual or audio recording of any aspect of this course. Students who have a recording accommodation agree in writing that they:

- Will use the records only for personal academic use during the specific course.
- Understand that faculty members have copyright interest in their class lectures and that they agree not to infringe on this right in any way.
- Understand that the faculty member and students in the class have privacy rightsand agree not to violate those rights by using recordings for any reason other than their own personal study.
- Will not release, digitally upload, broadcast, transcribe, or otherwise share all or any part of the recordings. They also agree that they will not profit financially and will not allow others to benefit personally or financially from lecture recordings or other course materials.
- Will erase/delete all recordings at the end of the semester.
- Understand that violation of these terms may subject them to discipline under the Student Code of Conduct or subject them to liability under copyright laws.

Coronavirus Information

Students should follow the latest guidance found here (https://ovpi.uga.edu/_resources/documents/Syllabi-Info-for-Students-Spring-2022.pdf) and/or here (https://coronavirus.uga.edu).

ASSIGNMENTS

Your final grade will be based on the following (DataCamp extra credit excluded):

Assignment	Percent Weight

R Chapters (9)	10
R Labs (10)	10
Problem Sets (4)	50
Midterm Exam	15
Final Exam	15

Grading Scale

Letter Grade	Percentage
A	93.00-100
A-	90.00-92.99
B+	87.00-89.99
B	84.00-86.99
B-	80.00-83.99
C+	77.00-79.99
C	73.00-76.99
C-	70.00-72.99
D	65.00-69.99
F	64.99 and below
I	Incomplete