PADP 7120: Data Applications in Public Administration

Spring 2025, Section 44502

Classroom: Caldwell 305

Thursdays 3:55PM-6:45PM

INSTRUCTOR

"Plans are worthless, but planning is everything."

- Dwight D. Eisenhower

Dr. Alex Combs

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Office Location: Baldwin Hall 278

Office Hours: Calendly link on eLC

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 primarily develops skills in the following MPA program competency: To Analyze, Synthesize, Think Critically, Solve Problems, and Make Evidence-Informed Decisions in a Complex and Dynamic Environment. By successful completion of this course, students will be able to:

1. Practice various methods and analytical tools to analyze policy design and interpret data to provide effective reasoning for decision making, budget development, and policy creation;
2. Learn approaches to inform the public and other stakeholders about prospective policy alternatives or retrospective program evaluation through the presentation of data and research findings;
3. Produce research papers involving the synthesis of information, evaluation, and analysis of critical questions or problems currently facing the field of public administration and policy.

Secondarily, this course develops skills in the following MPA program competencies: 1) To Participate in, and Contribute to, the Public Policy Process, and 2) To Communicate and Interact Productively and in Culturally Responsive Ways with a Diverse and Changing Workforce and Society at Large.

TOPICAL OUTLINE

Data types and structures
Measurement validity & reliability
Data description
Data visualization
Regression analysis
Causation & bias
Sampling
Surveys & evaluations
Forecasting

COURSE MATERIALS

There is a wealth of free material teaching statistics and statistical software on the web. 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 (https://cran.r-project.org)
- RStudio (https://www.rstudio.com/products/rstudio/download/)

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

ASSIGNMENTS

Final Grade

Your final grade will be based on the following assignments:

Assignment	Percent Weight
R Chapters (8)	10
R Labs (9)	10
Problem Sets (3)	40
Midterm Exam	20
Final Exam	20

Assignment Descriptions

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=3385747&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. You may miss one R Lab without an excuse or consequence to your grade. The Late Work policy (see below) applies to additional missed R Labs. If excused, R Labs submitted late will be graded based on accuracy and completeness.

Problem Sets

Students are expected to complete three 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 learning 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 administered online via eLC. The exams will focus entirely on key 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. 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 Logistics (/d2l/common/dialogs/quickLink/quickLink.d2l?ou=3385747&type=content&rcode=usgq-22263816).

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

COURSE POLICIES

Syllabus Disclaimer

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

Attendance

I do not enforce a formal attendance policy. Attendance is encouraged but not required. While I will make every effort to make class valuable and engaging, if you simply do not want to be in class, then I would rather you not attend. In return, I ask that you not request my time outside of class to discuss something covered in a class you voluntarily missed. All graded assignments can be completed remotely without attending class meetings. However, multiple assignments--R Labs in particular--are designed to be completed in class to lessen the workload. Also, class meetings should facilitate successful completion of other assignments.

Late Work

Assignment deadlines will be enforced. Late work without an acceptable excuse provided prior to a deadline will receive no credit unless circumstances made advanced notice unreasonable. 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.

Class Participation

Students are asked to adhere to the following when participating in class:
- Please use laptops, tablets, and phones for class purposes only.
- Policy and its analysis involves values and opinions influenced by many factors. Relevant expression of personal values and opinions is encouraged. Respect

othersâ€™ rights to hold opinions and beliefs that differ from your own. Criticize ideas, not individuals. Civil discourse and/or disagreement is expected.

- Listen carefully to what others are saying even when you disagree with what is being said. Comments that you make (asking for clarification, sharing critiques, expanding on a point, etc.) should reflect that you have paid attention to the speakerâ€™s comments.
- Support your statements. Use evidence and provide a rationale for your points.
- Be courteous. Donâ€™t interrupt or engage in private conversations while others are speaking.
- Avoid blame, speculation, and inflammatory language.
- Allow everyone the chance to speak. If you have much to say, try to hold back a bit; if you are hesitant to speak, look for opportunities to contribute to the discussion.
- Avoid assumptions about any member of the class or generalizations about social groups. Do not ask individuals to speak for their (perceived) social group.

Academic Honesty

As a University of Georgia student, you have agreed to abide by the Universityâ€™s academic honesty policy, â€œA Culture of Honesty,â€ and the Student Honor Code. All academic work must meet the standards described in â€œA Culture of Honestyâ€ 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.

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 https://sco.uga.edu (https://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, anytime, any place. Whether on campus, or studying from home or abroad, UGA Well-being Resources are here to help.

- Well-being resources: https://well-being.uga.edu (https://well-being.uga.edu)
- Student Care and Outreach: https://sco.uga.edu (https://sco.uga.edu/)
- University Health Center: https://healthcenter.uga.edu (https://healthcenter.uga.edu)
- Counseling and Psychiatric Services: https://caps.uga.edu (https://caps.uga.edu) or CAPS 24/7 crisis support at 706-542-2273
- Health Promotion/Fontaine Center: https://healthpromotion.uga.edu (https://healthpromotion.uga.edu)
- Disability Resource Center and Testing Services: https://drc.uga.edu (https://drc.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 (https://well-being.uga.edu)

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) (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) (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.

ChatGPT

Students may use ChatGPT or other generative AI to complete work. Students are expected to disclose having used ChatGPT for completed work and cite the work of others that ChatGPT references in its responses.

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