

University of Georgia
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Course home page:

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PADP 7120 – Data Applications
Spring 2020

Learning Objectives I will help you better understand key concepts in data applications. You will learn how data helps us make decisions. You will use math to describe data and assess causal relationships.

This course contributes to our MPA program's Competency 3: To analyze, synthesize, think critically, solve problems and make decisions.

“Students in the Master of Public Administration program at The University of Georgia will utilize various methods and analytical tools to analyze and interpret data to provide effective reasoning for decision-making and policy creation. Students will learn to effectively and concisely inform the public and other stakeholders of decisions and initiatives through the presentation of data and research findings. Furthermore, they will 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.”

There are two primary learning objectives for this course:

- “Students will use various methods and analytical tools to analyze and interpret data to provide effective reasoning for decision making and policy creation.”
- “Students will concisely inform the public and other stakeholders of decisions and initiatives through the presentation of data and research findings.”

Given that this is homework intensive course, this course will not concentrate on the following learning objective that supports Competency 3 (although short writing assignments are required).

- “Students will 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.”

Teaching Approach I will help you identify the key concepts discussed in the material. Students often learn best in small study groups, so you will also work in groups.

I will assume you have already taken PADP 7110. Please let me know if you have not.

This is a homework-intensive course. I will distribute details online.

- You will complete 6 problem sets. You will also peer review other students' problem sets. See below for more information.
- You will attend a meeting of a county, city, town, state, nonprofit, or other policy-setting body. You will write a summary that includes details of the meeting along with your observations. Include a copy of the agenda. You may not attend a meeting held at UGA.
- You will interview a public official about their work. You may not interview a UGA official.

Problem Sets (PS)

- You will complete 6 problem sets during the term.
- The sets are due at the beginning of class; late problem sets are accepted only by prior arrangement.
- You are encouraged to work together on problem sets, but must turn in your own work.
- The sets will be graded on correct answers and methods, so hand in all your work with each set, including your calculations and explanations of your reasoning.
- Work out problems on lined paper in pencil. You must submit hard copy of answers to problem sets (typed or neatly printed): electronic copy is not acceptable.
- Your homework must include an affidavit that another student in the class peer-edited it.
- Problem sets will be available electronically via ELC.

Text and Materials:

- Required:
 - Stephens, Larry J. 2009. Beginning Statistics. 2nd Edition. Schaum. (S) ISBN-13: 978-0071635332.
- I will distribute other readings online at the course home page.

Use of Software The purpose of this class is to provide a foundation of knowledge about the use of statistics in making decisions in the public sector. I do not focus on using statistical software but instead emphasize the meaning and mechanics of statistical decision-making. We complete problem sets by hand – we do not use statistical software.

However, some students with previous training in statistics may find parts of this class too slow. As such, I encourage those students to use this class to reinforce their understanding of the meaning and mechanics of statistical decision-making. If you also want to learn a statistical software package, you may use any extra time for the following:

- Read the relevant sections of this open access textbook:
 - Jenkins-Smith, Hank, et al. 2017. Quantitative Research Methods for Political Science, Public Policy and Public Administration, With Applications in R. University of Oklahoma Libraries.
 - Available at: <https://open.umn.edu/opentextbooks/textbooks/quantitative-research-methods-for-political-science-public-policy-and-public-administration-with-applications-in-r-3rd-edition>
- Install R and RStudio on your computer, as discussed in the book.
- Install R Commander, as shown at <https://www.rcommander.com>.
- Practice using R to do basic statistics, as shown in the book.
- Alternatively, use R, RStudio, and R Commander on Vlab at <https://vlab.uga.edu/vpn/index.html> (although workspaces may need to be reestablished regularly) or RStudio online at <https://rstudio.cloud> (although you will not be able to run R Commander in this environment).

I encourage you to learn a statistics package like R if you have time and energy. However, my first commitment is to helping all members of this class understand the meaning and mechanics of statistical decision-making. For this reason, I will not devote time in class to covering R, helping with installs, etc.

Evaluation

- 35% First Assessment
- 35% Second Assessment
- 20% Problem Sets
- 10% Summaries of local policy meeting and email interview.

An A will be given to anyone with 93 or more points, an A- to those with 90-92 points, a B+ to those with 87-89 points, a B to those with 83-86 points, a B- to those with 80-82 points, a C+ to those with 77-79 points, a C to those with 73-76 points, a C- to those with 70-72 points, a D to those with 60 to 69 points, and an F to anyone receiving fewer than 60 points in the course.

Instructor Availability If you would like to speak with me outside of class, feel free to stop by my office during scheduled office hours. Occasionally I have meetings during the day and may be unavailable. To ensure that I am available on a given day, email me at least 24 hours in advance to set a specific time to meet.

Class Attendance/Participation Students are expected to participate through asking questions and answering inquiries raised in class. Keep in mind that it is difficult to participate without being physically present. To adequately prepare for class, all assigned readings should be completed by the dates indicated on the course schedule. Not all assigned readings may be discussed in class; nonetheless you are responsible for familiarizing yourself with them.

Special Needs and Academic Honesty Students with special needs that require accommodation should notify the Office for Disability Services and me as soon as possible so the appropriate arrangements can be made. All information as well as documentation is considered confidential. All academic work must meet the standards contained in “A Culture of Honesty.” Students are responsible for informing themselves about those standards before performing any academic work. The link to more detailed information about academic honesty can be found at: http://www.uga.edu/honesty/ahpd/culture_honesty.htm.

Religious Holidays Students who are absent from academic or social activities because of religious observances will not be penalized. If you desire to be excused from class to observe a religious holiday, notify me in advance. You are still responsible for any material covered during the excused absence, but will be permitted a reasonable amount of time to make up any work missed. If an event is scheduled during the class at which you are excused for a religious observance, you should make arrangements with me as soon as possible for an alternate time or be given a comparable assignment.

Miscellaneous No “extra credit” will be assigned in this course under any circumstances. Keep in mind that final grades may only be changed in the event of a clerical error (e.g., points summed incorrectly). Also, for privacy reasons, information pertaining to course grades cannot be discussed over the telephone or via email. A final grade of “Incomplete” will only be given in this course under extraordinary circumstances and is solely at the discretion of the instructor. The course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary. Please silence devices while in class. Devices and laptops may only be used in-class with my permission. I accept late work after the due date only by prior arrangement. You must type any grade appeals and attach supplemental information as appropriate.

Campus resources: There are many resources on campus that offer support during your time here at UGA. They are here for you, so please take advantage of them.

Academic support

- The Division of Academic Enhancement Academic Coaching:
 - <https://dae.uga.edu/services/academic-coaching/>
- The Presentation Collaboratory:
 - https://dae.uga.edu/services/presentation_collaboratory/
- Student Success Workshops:
 - <https://dae.uga.edu/services/student-success-workshops/>
- Tutoring through the Academic Resource Center:
 - <https://dae.uga.edu/services/tutoring/>
- Resources for academic success at UGA:
 - https://dae.uga.edu/resources/academic_success_resources/
- First Generation Student Resources:
 - https://dae.uga.edu/resources/first_generation_student_resources/
- International Student Resources:
 - <https://dae.uga.edu/resources/international-student-resources/>
- Intensive English Program
 - <https://dae.uga.edu/iep/intensive-english-program/>

Technology support

- If new to campus:
 - https://eits.uga.edu/support/new_to_campus/
- Mobile App Warehouse
 - <https://dae.uga.edu/resources/mobile-app-warehouse/>
- Enterprise Information Technology Services
 - <https://eits.uga.edu>
- EITS Support
 - <https://eits.uga.edu/support/>
- Site-licensed Software
 - https://eits.uga.edu/hardware_and_software/
- Vlab

- <https://eits.uga.edu/support/vlab/>
- Printing Kiosks
 - https://eits.uga.edu/support/printing_kiosks/
- Accessibility Group
 - http://www.amacusg.gatech.edu/wag/Main_Page

Personal support

- Graduate Student Financial Aid
 - <https://dae.uga.edu/iep/intensive-english-program/>
- Aid for Student Veterans and Military-Connected Students
 - https://osfa.uga.edu/types-of-aid/DoD_tuition_assistance/
- Student Veterans Resource Center
 - <https://svrc.uga.edu>
- Dean of Students
 - <https://dos.uga.edu>
- Counseling Center
 - <https://www.uhs.uga.edu/caps/welcome>
- Disability Resource Center
 - <https://drc.uga.edu/site>
- Financial Hardships Support Gateway
 - https://financialhardship.uga.edu/content_page/uga-resources-funding-and-employment
- Women's Resource Center
 - <https://women.uga.edu>
- LGBT Resource Center
 - <https://lgbtcenter.uga.edu>
- Student Care and Outreach
 - <https://sco.uga.edu>
- UGA Police
 - <https://www.police.uga.edu>
 - 911 or 706-542-2000

Schedule of Topics:

Week	Topic	S	PS DUE
1 (1.13)	Introduction and Overview, Introduction to Statistics		
2 (1.20)	MLK Break (no class)		
3 (1.27)	Organizing Data, Data Description	1-3	
4 (2.3)	Data Description, Probability	3-6	
5 (2.10)	Probability, Discrete and Continuous Random Variables	3-6	
6 (2.17)	Random Variables and Sampling Distributions	5-7	1
7 (2.24)	Sampling Distributions and Estimation	7, 8	2
8 (3.2)	First Assessment: Covers Chapters 1-8 Open book and notes; calculators required; no computers		3
9 (3.9)	Spring Break (no class)		
10 (3.16)	Tests	9	
11 (3.23)	Inferences	10	
12 (3.30)	Categorical Variables	11	
13 (4.6)	ANOVA	12	4
14 (4.13)	Regression and Correlation	13	5
15 (4.20)	Regression and Correlation	13	
16 (4.27)	Second Assessment: Covers Chapters 9-13 Open book and notes; calculators required; no computers		6, all other deliverables