

## Research Methods for Public Managers: Data Analysis

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<https://www.icpsr.umich.edu/icpsrweb/ICPSR/search/studies?q=leonmoreta>

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**Class Sessions:** Dane Smith Hall (DSH) 134, Saturday 9:00 - 11:30 am

**Office Hours:** Friday 3:00 - 5:00 pm. Alternative times available by appointment.

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### RECOMMENDED BACKGROUND

- STAT 145 Introduction to Statistics (or equivalent coursework)

### COURSE DESCRIPTION

Welcome to PADM 596 *Research Methods for Public Managers: Data Analysis*. This course introduces students to basic statistical methods and their application to public management, policy, and decision-making. It covers the essential elements of descriptive statistics, univariate and bivariate statistical inference, and an advanced introduction to multivariate analysis. While discussing the foundations of statistical theory, the course emphasizes applied statistics and data analysis, using the software package SPSS.

The course provides MPA students with fundamental tools for applied research and analysis in public and nonprofit organizations. It develops the knowledge and skills you will need to understand and effectively use statistical methods of research. We'll begin the course by reviewing fundamental concepts and techniques of descriptive statistics and then concentrate on methods of inferential statistics, emphasizing data analysis and reporting for applied public management and policy research. We'll study a variety of methods, including measures of central tendency, measures of dispersion, normal distribution theory, analysis of variance (ANOVA), chi-square, correlation, and multiple regression.

### COURSE OBJECTIVES

This course presents methods for inquiry and analysis by public managers and students of public administration. It covers strategies for the design of quantitative research the analysis of statistical data in institutional and field settings.

Students who complete the course are expected to leave with the ability to:

- Propose research questions for empirical analysis
- Design research strategies to test research hypotheses

- Understand the different types of data used by public managers, policy analysts, and researchers in public administration, policy, and applied social science
- Learn when and how to use alternative methodological techniques
- Appreciate the importance of using plain language to report data analyses and findings
- Use SPSS to analyze statistical data

The following MPA core outcomes of learning are addressed in this course. Students will be able to analyze:

1. Policies and programs by applying appropriate information technology and data management techniques
2. Policies and programs by applying appropriate quantitative methods of data analysis and reporting

## **POLICIES**

*Punctual Attendance Required:* Beginning the first day of class, attendance will be recorded at 9:00 am. Per the UNM Student Handbook, a student may be dropped from the course as a consequence of absences from class.

*No Late/Makeup Assignments:* Late or makeup assignments won't be accepted. Under extraordinary circumstances, I may consider a late submission for partial credit.

*Time/Workload Commitment:* This is a core course of the MPA program that requires **independent work and study**. Graduate students should commit at least 10 hours per week to the course outside of class.

*Electronic Devices:* In class, **turn off cell phones**. A laptop is acceptable for class-related purposes only, such as taking notes. **Don't use electronic devices for any other purpose.**

*Academic Integrity:* The UNM Student Handbook outlines the University's expectations for the integrity of students' academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process. Students are responsible for reading the Student Code of Conduct and for upholding the highest standards of integrity in this class. Violation of the Code carries penalties discussed in the Code. Students' submitted work will be checked for originality through the SafeAssign software.

*Accommodation for Disabilities:* Students with disabilities needing accommodation should: (1) register with and provide documentation to the UNM Accessibility Resource Center, and (2) bring a letter to the instructor indicating the need for accommodation and what type. This should be done during the first week of class. This syllabus and class materials are available in alternative format upon request. For more information regarding resources available to students with disabilities, please contact Accessibility Services at Mesa Vista Hall 2021; phone: (850) 277-3506; or <http://pathfinder.unm.edu/campus-services/services-students-disabilities.html>

*Email Communication:* Per SPA policy, students should use their UNM email for electronic communication with the professor.

*Student Feedback:* Your feedback on the course will be welcome and appreciated. We'll ask for your feedback through various channels, formal and informal, throughout the semester.

*Syllabus Changes:* **This syllabus will be subject to change as needed.** I reserve the right to change any content of the syllabus, including grade re-weights allocated to course assignments. New assignments may be added over the semester. **Please use the syllabus posted on Learn for the most recent, updated version.**

## COURSE MATERIALS

### *Required*

1. Healey, Joseph. **2016.** *The Essentials of Statistics: A Tool for Social Research*, **4<sup>th</sup> edition.** Boston, MA: Cengage. ISBN-13: 978-1305093836, <https://www.cengage.com/c/the-essentials-of-statistics-a-tool-for-social-research-4e-healey>
2. SPSS Grad Pack 25.0, <https://www.ibm.com/us-en/marketplace/spss-statistics-gradpack>
3. UNM *Learn* and email

## GRADING

Participation	10
Problem sets	10
Tests	20
Research Project	30
<u>Final exam</u>	<u>30</u>
<b>Total grade</b>	<b>100 points</b>

*Participation:* This will be worth 10 points out of 100 course points. **Punctual attendance is required for every class** meeting of the semester. Active participation in class is expected. In class, please feel free to interrupt me with questions or comments. Please thoroughly study the weekly material in preparation for class participation. Participation includes asking questions, commenting on the class material, answering instructor's questions, collaborating in group activities, and citizenship behavior in class. These requirements apply equally to Zoom and main-campus students.

*Tests:* These will be worth 20 points out of 100 course points. They will assess weekly reading assignments. **Readings must be completed before class** meetings when those readings will be discussed. Weekly readings are based on the textbook, but additional readings may be assigned during the semester. The weekly test will open on *Learn* after class and is due on Friday at 10:00 PM—the day before the next class meets. Tests include a variety of questions. Tests are an essential component of this course because they give you opportunities for skill application and practice toward the final exam.

*Problem sets:* Problem sets will be worth 10 points out of 100 course points. They will be applied exercises regarding the weekly material. Problem sets are an essential component of the course because they give an opportunity for practical applications. The problem sets will be announced

by Learn or email. The weekly problem set will open on *Learn* after class and is due on Friday at 10:00 PM—the day before the next class meets.

*Research Paper:* A research paper will be worth 30 points out of 100 total points. This project will include the submission of a paper. The paper should be written in the format of the PADM 553 professional paper (pro-paper). In this research, you'll follow and complete the projects 1 and 4 from Appendix E of the text (plus the project 2 from page 393), using data from the General Social Survey (GSS) of 2012. You'll provide reports of your research over the semester and an oral presentation. Students' submitted work will be checked for originality through the UNM SafeAssign system. Your research paper should effectively apply methodological techniques learned from the course. I will give, in class or by email, further information regarding this research paper.

*Final exam:* The final exam will be worth 30 points out of 100 total points. The exam format will be similar to the tests but comprehensive of all course materials. This final examination will be administered on the day determined by the UNM Final Exam Schedule.

## COURSE CALENDAR

Week	Read	Test-Set by
I	Ch 1 introduction — Ch 2 basic descriptive statistics	Aug 24
II	Ch 3 measures of central tendency	Aug 31
III	Ch 4 measures of dispersion	Sep 07
IV	Ch 5 the normal curve	Sep 14
V	Ch 6 introduction to inferential statistics	Sep 21
VI	Ch 7 hypothesis testing I	Sep 28
VII	Ch 8 hypothesis testing II	Oct 05
FALL BREAK		
VIII	Ch 9 hypothesis testing III	Oct 19
IX	Ch 10 hypothesis testing IV	Oct 26
X	Ch 11 association for nominal variables	Nov 02
APPAM CONFERENCE		
XI	Ch 12 bivariate correlation and regression	Nov 16
THANKSGIVING		
XII	Ch 13 partial correlation and multiple regression	Nov 30
XIII	In-class presentation of research projects	Dec 08
FINAL EXAM		Dec 15

*Note:* There is no class on October 13, November 10, and November 24. A class picture is scheduled for the last class meeting.