

**RPAD 505 Statistics for Public Managers and Policy Analysts
(Data, Models, and Decisions II)**

Catalog number: 3155 Fall 2017

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Office hours: Tuesday 4:30 – 5:30 pm

Office hour location: Draper 118B

Classroom: HS 004

Class time: Mo 5:45PM - 9:25PM

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Course Description

The goal of this course is to develop a basic level of statistical literacy that will allow students to critically examine research evidence on important policy and public administration issues. This includes making students better consumers of news stories that cite empirical studies, reports by think tanks and other sources of policy analysis as well as original research studies published in academic journals. Topics include summarizing, presenting and cleaning data; sampling; study design; and data analysis including hypothesis testing and regression. In this course, students will also learn how to use a statistical package (Stata) to analyze and present data.

Learning Objectives

Several of the key objectives to be achieved through this course include:

- To develop an appreciation of the importance of statistics in contemporary public inquiry,
- To gain increased sophistication as a statistical "consumer" who understands the strengths and limitations of statistical analysis, and
- To view key elements of research design from an administrative perspective in which the costs and benefits of alternative data gathering options are considered.

Required Materials

- Meier, K.J., Brudney, J.L., Bohte, J. (2014). *Applied Statistics for Public and Nonprofit Administration, 9th edition*. Wadsworth Publishing. This is an expensive textbook, buy used copies and save some bucks!
- Microsoft Excel
- Stata 13 or above

We will use Microsoft Excel and Stata extensively throughout the semester. Most of the problem sets, class activities, and your final report will involve using either Microsoft Excel or Stata. I assume that you have already had Microsoft Excel installed on your computer. Stata is installed on any computers in university's labs and library. If you want to work with Stata on your own computer you may purchase the student version as cheap as \$45 for a six-month license Stata (<http://www.stata.com/order/new/edu/gradplans/student-pricing/>). This version is sufficient for this course.

Stata is a widely used statistical software by faculty in our school. Having knowledge and programming skills in Stata or other statistical softwares will give you a great advantage in the job market. I will not teach you how to do statistical programming in this course but I will help you using Stata's basic functions to do statistical analyses.

If you think you need to learn Stata programming, I strongly recommend RPAD 688. I also recommend a book, “A Gentle Introduction to Stata, Fourth Edition 4th Edition” by Acock, Alan C (2014), which will help you to become more familiar with Stata.

- **Electronic Resources**

Finding professional resources is an important professional skill, this course encourages you to be familiar with finding materials from the journal databases. **ALL professional readings will be available on line**, unless otherwise specified and provided.

Professional articles are available for full-text download through the SUNY library website (go through the Journal Finder, not the normal catalog). The library’s e-Journals tab can often find things that EBSCO cannot. Learn how to use it. Note that with the e-Journals tab you search for the journal, such as American Economic Review. Once you’ve entered the database for the journal you need, you can search or browse to the specific article you need.

I will also show you on the first day of class. ☺

Do NOT try to find a different version of the article, the content and page range would be different than assigned. Find me, the TA, or your colleague if you have difficulties finding the materials.

Assignments/Evaluations

Each assignment will receive a letter grade from A to E base on your raw score. At the end of the semester, I translate these grades into a 4pt scale, with A = 4.0, A- = 3.66, B+ = 3.33, B = 3.0, B- = 2.66, and so on. Then I take a weighted average of all your grades to get your final 4pt grade. The final letter grades will be assigned as followed:

Grade	Minimum Points Earned	Percentage
A	3.72	93%
A-	3.60	90%
B+	3.48	87%
B	3.32	83%
B-	3.20	80%
C+	3.08	77%
C	2.92	73%
C-	2.80	70%
D+	2.68	67%
D	2.52	63%
D-	2.40	60%
E	2.39 and below	59% and below

Participation (10%)

Participation scores will comprise of two components:

- Quiz (5%)

There will be quizzes every week of class throughout the semester. They will serve

as a method to quickly communicate your understanding of course materials with me. It would be graded by efforts not correctness. Sometimes there are no correct answer. Students would receive full points for giving careful thoughts on the questions.

The quizzes are performed at the beginning of the class with limited time. ☺

- In-class participation (5%)

If students regularly attend class, pay attention, listen to their classmates, ask thoughtful questions, actively participate in class discussion, and serve as productive team members for group assignments, they will receive full points.

Problem Sets (30%, 10 assignments, 3 points each)

For this course, you will improve your problem-solving skills in eleven problem sets. Your lowest grade out of the problem sets will be automatically dropped, which means that you may opt to not turn in one of the problem sets.

The problem sets are due at the beginning of the class and in paper, unless otherwise specified.

You are encouraged to discuss the problem sets with your peers, provided that:

- You attempt every problem on your own before discussing them with colleagues;
- You write up your own individual assignments from scratch, without looking at your colleagues' work while you do it; and
- That you explicitly acknowledge whom you worked with on the front page of the assignment.

Copying a colleague's work directly is cheating.

Note: For a 4-credit course, you should expect 12 hours each week to work on reviewing materials from class, reading and working on problem sets.

Midterm Exam (20%) and Final Exam (20%)

There will be two exams in this course. The exams will ask you to work on problems and answer questions that build on problem sets and in class activities. First halves of the exams are in-class and close-book. You are allowed to bring 3 by 5 size notecard to the exams. The second halves of the exams are in Stata.

Semester-Long Project (20%)

You can choose your own topic and dataset.

- One-Page Concept Sheet (2%)

For this assignment, you will be graded on your effort not the quality of your work. I will discuss what I'm looking for in this assignment in class.

- First Draft (3%)

You are not required to attend class on the Monday of the Thanksgiving week, but remember there is an assignment due on that day. ☺

I will be in the classroom if you need help with the final project or any materials in this class. To provide a chance to make last minute changes on the first draft base on the Q&A session, the assignment is due at 11:59pm on Blackboard. That is not a lot of time to make changes! If you need any help with your project, ask early.

For this draft, you will be graded on your effort not the quality of your work. I will discuss what I'm looking for in this draft in class.

- Final Draft (10%)
You will be graded base on the quality of your work. I will post a grading rubric later this semester.
- Presentation (5%)
You will be graded base on the quality of your presentation. I will post a grading rubric later this semester.

Course Policies

Plagiarism and Citations

I assume you are familiar with American standards regarding plagiarism. You must familiarize yourself with the information at <http://library.albany.edu/usered/plagiarism/index.html> . Plagiarism is a major offense and can receive severe punishments, from automatically failing the course to being expelled from the program. If in doubt about acceptable use of sources, ask.

Correct citations are one of the more important elements in avoiding plagiarism. When you use a source in a memo, make sure to cite it using any standard academic citational method. (I personally prefer the author-date parenthetical citation method used in economics, but I see no reason to force you to adopt economic norms.) Two things I do care about, no matter which standard you adopt: a) the titles of sources do not belong in the main text of your paper, but rather in the Works Cited page or a footnote, and b) article titles go in quotes; book and journal titles go in italics.

The key to a citation is that the reader must be able easily to track down the source.

Web Citations: It is helpful to the reader to include URLs on the Works Cited page for material located on the internet, assuming that the URL is permanent and that the website is universally accessible. You would NOT provide URLs for published journal articles you have accessed through the library, but you would provide a URL for a government report or for a working paper downloaded from an author's website. Some conventions call for including the date you accessed internet materials; these conventions are necessary in increasingly rare circumstances. There is a distinction between material that exists in a final, dated form that happens to be located on the internet and material from fluid web sites. If something is fixed, such as a journal article, dated working paper, or government report, then you do NOT need to report the date you accessed the information; simply report the date of the document itself. If something could be changed at any moment, then you must report the date you accessed the website.

Absence Policies

This course is designed to use class time to develop skills that would not otherwise obtained from the readings. It is crucial to your success in this class to attend all class. I'm happy to work with you if you have reasons to be routinely late for class. Find me as soon as possible if you are expecting to be late or absence. Whenever in doubt, please refer to University's Medical Excuse Policy at http://www.albany.edu/health_center/medicaexcuse.shtml.

Late Work Policy

I understand that challenging life events can happen. You will get a one-time automatic three-day extension one of the assignments. You can send me the scanned copy of your assignment through email. After using this one-time extension, your grades

would be reduced by 10% for every 24 hours of the lateness. Because this class is cumulative, some students find it helpful to go through old assignment keys before working on the next assignment. (This is highly encouraged!)

All Problem Sets are due at the beginning of the class. There is only one assignment due in a different time, the draft of final project, which is due at 11:59pm on Blackboard. I will discuss about this further in the assignment section.

Disability Policy

Please see me if you have disability conditions for academic accommodations. Whenever in doubt, please refer to University's Disability Resource Center at <http://www.albany.edu/disability/index.shtml>.

Class Schedule

Week	Date	Topic	Reading	Assignment Due
1	28-Aug	Introduction	Syllabus	
2	4-Sep	No Class. Labor Day		
3	11-Sep	Measurement and Research Design	Chapter 1,2,3	Problem Set 1
4	18-Sep	Descriptive statistics, frequency distribution	Chapter 5,6	Problem Set 2
5	25-Sep	Normal distribution and sampling theory	Chapter 4,7	Problem Set 3
6	2-Oct	Sampling and inference	Chapter 10	Problem Set 4 One-Page Concept Sheet
7	9-Oct	Hypothesis testing	Chapter 11,13	Problem Set 5
8	16-Oct	Midterm		
9	23-Oct	Contingency table and association*	Chapter 14, 15	Problem Set 6
10	30-Oct	Regression I	Chapter 17, 18	Problem Set 7
11	6-Nov	Regression II	Chapter 20	Problem Set 8
12	13-Nov	Regression III	Chapter 21	Problem Set 9
13	20-Nov	Q&A for Final Project		Draft Final Project (Due at 11:59pm)
14	27-Nov	Time series analysis	Chapter 19	Problem Set 10
15	4-Dec	Panel data analysis	Readings on Blackboard	Problem Set 11
16	11-Dec	Presentation and review		Final Project
17	18-Dec	Final Exam		

* last day to drop course with "W" assigned