



THE OHIO STATE UNIVERSITY

JOHN GLENN COLLEGE OF PUBLIC AFFAIRS

Public Affairs Statistics – Hybrid Delivery PUB AFRS 6070

Tuesday 5:45pm – 7:45pm
Page Hall 040

Credit Hours: 4

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Office Hours: Tuesday 2pm – 4pm or by appointment

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Office Hours: Thursdays 11:30 – 1:00 pm

COURSE DESCRIPTION

This course will provide students with analytical knowledge and tools necessary to acquire, manage, and analyze data. Students learn probability and statistics to conduct analysis and evaluation and to evaluate the quality of analyses conducted by others.

CURRICULUM LEARNING OBJECTIVES

This course is designed to address the following John Glenn College learning objectives:

- Methods 4 - Seek and identify patterns in data
- Methods 5 - Understand the logic of a statistical argument and be able to produce them for varied audiences and in multiple ways
- Methods 6 – Support claims with statistically sound quantitative and/or qualitative evidence

COURSE LEARNING OBJECTIVES

Most public policy and management arguments are predicated on the availability and interpretation of good evidence. It is important, therefore, to have a sound understanding of what constitutes credible evidence in support of a policy argument and a management decision in the public and nonprofit sectors. It is expected that by the end of the course, students will have the basic tools to calculate, communicate, and consume applied statistics related to public policy problems. Specifically, students will become: familiar with basic statistical logic, capable of computer-based statistical analyses, able to interpret and communicate statistical information in both technical and non-technical language, and critical of statistical analyses produced by others.

REQUIRED MATERIALS AND RESOURCES

Textbooks

- Utts and Heckard, *Mind on Statistics*, Recent edition, ISBN13: 978-0-538-73348-9
- Allison, *Multiple Regression: A Primer*, ISBN 13: 9780761985334
- Supplementary reading materials will be available through Carmen.

Students can access textbook information via the Barnes & Noble bookstore website: www.shopOhioState.com as well as from their BuckeyeLink Student Center. This information is disseminated by B&N to all area bookstores. You may buy from a store of your choice and/or shop for books (always use ISBN# for searches) on line.

Software

- The course uses Small Stata, which is available on the computers in the 030 and 040 labs. Small Stata is designed for classes and is limited to 99 variables and 1,200 observations. If you have data with more observations, a full “IC” version of Stata 12 is installed on lab computers 030p07-030p12.
- Printed user manuals are in the 030 lab and a pdf version is installed with each copy of Stata.
- If you would like to purchase Stata for use on your own computer, pricing information is available at <http://www.stata.com/order/new/edu/gradplans/gp-campus.html>.

COURSE FORMAT

This class will be taught as a hybrid course. This means lectures, activities, videos, practice quizzes, and possibly other material will be posted online by Wednesday evening each week. You are **REQUIRED** to listen and work along with all material that is posted online before coming to class the following Tuesday. Note that this is a four credit hour class and we meet only for two hours. Thus, satisfactory completion of this course requires you actively engage with all online material. Treat this material as you would class time: take notes and formulate questions. If you do not do this, you will quickly fall behind as it would be the equivalent of showing up for only half of each class period. If it becomes apparent that students are not keeping up with the online material, I reserve the right to begin administering quizzes at the beginning of class covering the previous week’s online content.

Class time will start with a short recap of online material and a Q&A session to clear up any confusion. We will then focus on activities, applications using Stata, and general discussion of the topics at hand.

In addition to understanding the concepts, learning statistics requires a fair amount of drill and practice. To help with the practice, regular homework assignments and in class exercises will be given. Note there is considerable redundancy in the way in which the material will be introduced—both online and in class. It is expected that you will supplement classwork with the textbook, the software, fellow students, the teaching assistant, the professor, and the internet.

COURSE REQUIREMENTS AND POLICIES

Attendance and Class Participation

While there is no specific grade given for attendance and class participation, attendance is required and will be noted. Excessive absences will result in final grade reduction. It is also expected that students attend class prepared to participate in class exercises. Quality of class participation may factor into the final grade in the event that a student is on the border between grades. Note that disruptive behavior such as browsing the

internet, speaking or texting on a cell phone, or having conversations with other students during lecture is prohibited during class and reduces the quality of one's participation. Further, consistently arriving to class late negatively affects one's participation.

Grading

Grades will be based on 300 points spread over six homework assignments (each is graded on a 75 point scale; I will take the average grade of the top five scores, or 25% of the course grade) and three exams (75 points each = 225 points, or 75% of the course grade).

This course is graded A – E, with the distribution outlined in the course requirements section. Transformation of numerical grade to letter grade will be according to the schedule:

93 – 100	A	80 - 82	B-	68 – 69	D+
90 – 92	A-	78 - 79	C+	64 – 67	D
88 - 89	B+	73 - 77	C	63 & below	E
83 - 87	B	70 - 72	C-		

Examinations:

Three exams will be given in class according to the schedule on the last page. They will each be worth 75 points. Exams will be in-class and open **notes**. More information regarding the structure of each exam will be available prior to the exam. Make-up exams will be given **only** when prior arrangements are made and only for documentable and unavoidable circumstances. Collaboration on exams is strictly forbidden.

Homework Assignments

There will be a total of six homework assignments. Your final grade will be calculated using the five highest scores. While you are encouraged to collaborate with other students in the course in solving homework problems, **you must turn in your own write ups**. All homework assignments must be submitted on Carmen before the beginning of the class on the day they are due. **Late work will not be accepted.**

Note:

- Homework assignments will be posted on Carmen.
- To receive full credit you must show all work
- You may use Stata as much as you can/want, UNLESS OTHERWISE NOTED
- When you use Stata to answer a problem:
 - Provide the Stata output as part of what you turn in (a Stata log file will save results)
 - This is “showing your work” for Stata problems
 - Organize and properly label your output
 - It should be obvious which output goes with which questions. It may be best to incorporate the output by cutting and pasting or you may write on the page directly.
 - Minimize the amount of output and number of pages if at all possible.
 - Make sure that you also directly answer the question
 - E.g. it is not enough to provide the Stata output that shows that a mean is 1234. You should also tell me that the mean is 1234, as is indicated in the Stata output.

GRADE APPEALS

The assigned grade is designed to show the overall quality of work performed by each student. If you believe that any grade was not properly assigned you may write a letter explaining why you believe the grade was incorrectly assigned within one week of receiving the graded assignment back. Each appeal will be considered, and if a re-grade is performed, final grade may be greater, less, or equal to the original grade.

ACADEMIC INTEGRITY (ACADEMIC MISCONDUCT)

(From: <http://oaa.osu.edu/coamfaqs.html#academicmisconductstatement>)

The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the University's [Code of Student Conduct](#) and that all students will complete all academic and scholarly assignments with fairness and honesty. Failure to follow the rules and guidelines established in the University's Code of Student Conduct may constitute "Academic Misconduct." Sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the University.

In the Ohio State University's [Code of Student Conduct](#), Section 3335-23-04 defines academic misconduct as: "Any activity that tends to compromise the academic integrity of the University, or subvert the educational process." Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the University's [Code of Student Conduct](#) is never considered an "excuse" for academic misconduct.

If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

Other sources of information on academic misconduct (integrity) to which you can refer include The Committee on Academic Misconduct web page: <http://oaa.osu.edu/coam.html>
Ten Suggestions for Preserving Academic Integrity: <http://oaa.osu.edu/coamtensuggestions.html>
Eight Cardinal Rules of Academic Integrity: www.northwestern.edu/uacc/8cards.html

Accommodation Policy

"Students with disabilities that have been certified by the Office for Disability Services will be appropriately accommodated and should inform the instructor as soon as possible of their needs. The Office for Disability Services is located in 150 Pomerene Hall, 1760 Neil Avenue, telephone 292-3307, TDD 292-0901; <http://www.ods.ohio-state.edu/>."

ADDITIONAL STUDENT RESOURCES

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing. If you or someone you know is suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the **Office of Student Life Counseling and Consultation Services (CCS)** by visiting ccs.osu.edu or calling 614-292- 5766. CCS is located on the 4th Floor of the Younkin Success Center and 10th Floor of Lincoln Tower. 24 hour emergency help is also available through the National 24/7 Prevention Hotline at 1-800-273-TALK or at suicidepreventionlifeline.org

GLENN COLLEGE DIVERSITY VALUES STATEMENT

The Glenn College is committed to nurturing a diverse and inclusive environment for our students, faculty, staff, and guests that celebrates the fundamental value and dignity of everyone by recognizing differences and supporting individuality. We are dedicated to creating a safe space and promoting civil discourse that acknowledges and embraces diverse perspectives on issues and challenges that affect our community.

PRELIMINARY COURSE OUTLINE

Class	Date	Topic(s)	Readings	Assignment Due
Introduction				
1	10-Jan	a) Course introduction and expectations b) Quantitative common sense		
Describing Data: Single Variable Statistics				
2	17-Jan	a) Introduction to data b) Describing data with pictures c) Describing data with numbers d) The normal curve +	UH 1, 2	
Describing Data: Multiple Variables Statistics				
3	24-Jan	a) Relationships between variables b) Correlation c) Two-way tables	UH 3, 4	HW 1
Generating Data				
4	31-Jan	a) Data properties b) Survey methods c) Sampling	UH 5, 6	HW 2
5	7-Feb	Exam 1		
Introduction to Inference				
6	14-Feb	a) Introduction to inference b) Sampling distributions c) Confidence intervals	Refer to p. 320 in UH: SD Module 0, CI Module 0, Section 9.10	
Making Inferences: Single Variable Statistics				
7	21-Feb	Hypothesis testing 1: One-sample means	Refer to p. 320 in UH: HT Module 0, SD Module 3, CI Module 3, HT Module 3	HW 3
8	28-Feb	Hypothesis testing 2: One-sample proportions	Refer to p. 320 in UH: SD Module 1, CI Module 1, HT Module 1	
Making Inferences: Multiple Variable Statistics				
9	7-Mar	Hypothesis testing 3: Two samples	Refer to p. 320 in UH: SD Module 2, 4, 5; CI Module 2, 4, 5; HT Module 2, 4, 5	HW 4
--	14-Mar	Spring Break -- No Class		
10	21-Mar	Exam 2		
11	28-Mar	Hypothesis testing 4: ANOVA Hypothesis testing 5: Chi-Square	UH 16, Healy Ch. 11 [Carmen]	
12	4-Apr	Regression analysis 1	TBD	HW 5
13	11-Apr	Regression analysis 2	TBD	
14	18-Apr	Regression analysis 3	TBD	HW 6
15	Friday, April 28, 8pm - 9:45 pm	Exam 3		