

Sociology – Quantitative Methods in Social Science (0825)

Spring Semester 2013

Professor Josh Klugman

Class Meeting Time:

MWF 12:00 – 12:50pm

Class Location: Anderson 007

Lab Location: Gladfelter 847

Amanda Turner Labs:

Section 001 Lab Time: W 9:00 – 9:50am

Section 002 Lab Time: W 10:00 – 10:50am

Corey Waters Labs:

Section 003 Lab Time: W 11:00 – 11:50am

Section 004 Lab Time: T 1:00 – 1:50pm

Josh Klugman

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Sociology Office: Gladfelter 763

Sociology Office Phone: 215-204-1452

Office Hours: M 5-6 (GH)

W 10:30-11:30 (WH)

F 10:30-11:30 (WH)

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Lab Instructors:

Amanda Turner

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Course Goals and Learning Outcomes: Our understanding of much of reality relies on statistics. Everyday, the media is saturated with statistical claims about our opinions, consumer habits, economic-well-being, and even our bodies. Unfortunately, it is easy to misuse statistics to confirm one's biases instead of making honest assessments of social processes. As citizens, workers, and consumers, we need a basic foundation in statistics so we can critically evaluate information presented to us.

This course gives students a basic introduction to the kind of statistics that are commonly used in the media (for example, polls and write-ups of statistical studies). The goal of the course is for students to understand statistical logic and to be savvy consumers of statistical knowledge. The course is divided into three units. First, we will cover the methods used to produce survey data (samples and experiments). Second, we will cover descriptive statistics, which are the techniques used to describe or summarize sets of numbers. We will use descriptive statistics to describe a single variable (e.g. what is the average income of Americans?) as well as statistics that describe relationships between multiple variables (e.g. what are the income differences between men and women and between Asians, Blacks, Latinos, and Whites?) Finally, we will also learn about inferential statistics, which are statistical methods that let us generalize from a sample to a population.

Prerequisites: No prior knowledge of statistics is necessary, but I assume that students have a solid grasp of arithmetic (for example, addition, subtraction, multiplication, division, fractions, decimals, percentages, square roots, and powers). If this does not apply in your situation, you should consider

dropping this course or taking advantage of the Math & Science Resource Center (<http://www.temple.edu/msrc/>) on Temple's main campus.

Course Materials

- Required: A cheap scientific calculator
- Optional Text: Moore, David S, and William I. Notz. 2006/2009/2013. *Statistics: Concepts and Controversies*. New York: W. H. Freeman. 6th edition ISBN: 0716786362. 7th edition ISBN: 1429229918. 8th edition ISBN: 978-1-4641-2566-9. I recommend purchasing this only if you are having difficulty with the lecture material.

You should bring your calculator to every class session. You will not be allowed to use cell phone calculators on the tests.

Powerpoint presentations and some occasional readings will be posted to Blackboard.

Communications Policy: We will not answer questions regarding course content through e-mail. Instead, such questions should be directed at the discussion forum on Blackboard. This will ensure students' equal access to information. Only questions specific to you (e.g. asking to arrange a meeting, or about your grades) should be sent through e-mail.

Attendance Policy: Because learning statistics is best done collectively, I expect you to attend all class and lab sessions. Attendance will be taken by sign-in sheet. If the sheet passes by you, then you are responsible for approaching us after class to let us know you attended.

If you miss class, you are responsible for obtaining materials covered in class as well as any special announcements made in class about changes in the course schedule or course policies. Starting the second week, we will take attendance at every class and lab. You have two free absences for emergencies. Attendance is worth 5 percent of your semester grade. Please do NOT contact us regarding absences UNLESS you have a documented reason for missing class for three or more days.

If you cannot attend a lab session, you are encouraged to attend a different one. However, we will only mark you as present for that lab session only if you attend a lab run by your assigned lab instructor.

Computing: You do not need to buy any software to do well in this course.

You will need access to a computer with a word processor, spreadsheet (preferably Microsoft Excel) and Internet access. I will post my PowerPoint slides to Blackboard, and you should print those out before class begins. I will make special announcements outside of normal class hours via e-mail or Blackboard, so I strongly suggest you check Blackboard and your e-mail account daily.

Requirements

Lab Exercises-- To hone your statistical skills and make you feel more comfortable using statistics, I require that you complete 8 lab assignments throughout the semester. I will drop the lowest 2 grades of your labs. Each lab is weighted equally (7 percent of your semester grade). Absolutely no late lab assignments will be accepted.

Exams—We will have three exams. Exam 1 is on Wednesday, February 20; Exam 2 is on Wednesday, April 3rd; and Exam 3 is on Monday, May 13th, from 10:30 to 12:30.

I will provide the necessary formulas so you do not need to engage in excessive memorization. The exams are semi-cumulative—they focus on the material covered since the previous exam but may require you to use the tools you learned before then.

I do not give make-up exams, except under the most extreme circumstances. If for some reason you have to miss an exam, the chances of you being allowed to do a make-up exam increase if you make arrangements with me before the exam date and you give me proof of the circumstances that prevent you from taking the exam. If an unplanned emergency prevents you from taking an exam, you must contact me either by e-mail or by phone no later than the day of the exam.

Paper—You will read parts of Joel Best’s book *Damned Lies and Statistics* (available on Blackboard) and apply his advice to a media report of a statistic of your choosing. You are required to turn in a preliminary report on Monday, February 25th (by 12pm), and the final paper is due 12:00pm Monday, March 25th (the second week after spring break).

For every day your proposal and / or paper is late, your grade for it will be reduced by 15 percentage points.

<i>Requirement</i>	<i>Due Date</i>	<i>Percentage</i>
6 Lab Assignments	Throughout the Semester	42%
Exam 1	February 20th	14%
Exam 2	April 3 rd	14%
Exam 3	May 13 th	14%
Paper Preliminary Report	February 25th	01%
Paper	March 25th	10%
Attendance		05%

Final Grade Cutoffs

A	97.0-100.0	C	73.0-79.9
A-	93.0-96.9	C-	70.0-72.9
B+	90.0-92.9	D+	67.0-69.9
B	87.0-89.9	D	63.0-66.9
B-	83.0-86.9	D-	60.0-62.9
C+	80.0-82.9	F	<60.0

Week	Date	Topic	Readings Boldface = Required <i>Italics = Optional</i>
1	1/23 (W)	Introduction	
1	1/25 (F)	Diagnostic	
2	1/28 (M)	Rules of Causality	<i>M&N Chap 15, section related to causation</i>
2	1/30 (W)	Sources of Data	Sanbonmatsu, Lisa, Jeffrey R. Kling, Greg J. Duncan, and Jeanne Brooks-Gunn. 2007. "New Kids on the Block." <i>Education Next</i> 7(4): 60-66. (read: 60-62) <i>M & N Chap. 1</i>
2	2/1 (F)	Sample Surveys	<i>M & N Chap. 2-4</i>
3	2/4 (M)	Sample Surveys	
3	2/6 (W)	Measurement	<i>M&N Chap. 8</i>
3	2/8 (F)	Measurement	Best, Chap. 1-3
4	2/11 (M)	Univariate Statistics: Graphs	<i>M&N Chap. 10 & 11</i>
4	2/13 (W)	Univariate Statistics: Graphs	
4	2/15 (F)	Univariate Statistics: Summary Statistics	<i>M&N Chap. 12</i>
5	2/18 (M)	Univariate Statistics: Summary Statistics	
5	2/20 (W)	Exam 1	
5	2/22 (F)	Univariate Statistics: Summary Statistics	
6	2/25 (M)	Univariate Statistics: Normal Distribution	<i>M&N Chap. 13</i>
		Paper Preliminary Report Due 12:00pm	
6	2/27 (W)	Univariate Statistics: Normal Distribution	
6	3/1 (F)	Univariate Statistics: Normal Distribution	
7	3/4 (M)	Bivariate Statistics: Basic Comparisons	Miller, Jane. 2004. "Types of Quantitative Comparisons." Chapter 5 in <i>The Chicago Guide to Writing About Numbers</i>. Chicago, IL: University of Chicago Press.
7	3/6 (W)	Bivariate Statistics: Basic Comparisons	
7	3/8 (F)	Bivariate Statistics: Basic Comparisons	Best, Chap. 4
	3/11-3/15	SPRING BREAK *** NO CLASS	
8	3/18 (M)	Bivariate Statistics: Two Categorical	<i>M & N Chap. 24 (skip chi-square test)</i>

		Variables	<i>material)</i>
8	3/20 (W)	Bivariate Statistics: Two Categorical Variables	
8	3/22 (F)	Multivariate Statistics: Three Categorical Variables	
9	3/25 (M)	Multivariate Statistics: Three Categorical Variables Best Paper Due 12pm	
9	3/27 (W)	Multivariate Statistics: Three Categorical Variables	
9	3/29 (F)	Bivariate Statistics: Two Quantitative Variables	<i>M & N Chap. 14-15</i>
10	4/1 (M)	Bivariate Statistics: Two Quantitative Variables	
10	4/3 (W)	Exam 2	
10	4/5 (F)	Bivariate Statistics: Two Quantitative Variables	
11	4/8 (M)	Probability & Sampling Distributions	<i>M & N Chap. 17-18</i>
11	4/10 (W)	Probability & Sampling Distributions	
11	4/12 (F)	Invisible Inequality	Western, Bruce. 2006. "Invisible Inequality." Chapter 5 in <i>Punishment and Inequality in America</i>. New York: Russell Sage Foundation
12	4/15 (M)	Confidence Intervals	<i>M&N Chap. 21</i>
12	4/17 (W)	Confidence Intervals	
12	4/19 (F)	Confidence Intervals	
13	4/22 (M)	Univariate Significance Tests	<i>M&N Chap. 22-23</i>
13	4/24 (W)	Univariate Significance Tests	
13	4/26 (F)	Univariate Significance Tests	
14	4/29 (M)	Bivariate Significance Tests	<i>M&N Chap. 24 (chi-square section)</i>
14	5/1 (W)	Bivariate Significance Tests	
14	5/3 (F)	Bivariate Significance Tests	
15	5/6 (M)	Catch-Up / Review	
16	5/13 (M)	Exam 3, 10:30am-12:30am	

Disability Statement: This course is open to all students who meet the academic requirements for participation. Any student who has a need for accommodation based on the impact of a disability should contact the instructor privately to discuss the specific situation as soon as possible. Contact Disability Resources and Services at 215-204-1280 in 100 Ritter Annex to coordinate reasonable accommodations for students with documented disabilities.

Policy on Academic Honesty: The section in italics is quoted verbatim from the Temple University Bulletin for 2012-2013.

Temple University believes strongly in academic honesty and integrity. Plagiarism and academic cheating are, therefore, prohibited. Essential to intellectual growth is the development of independent thought and a respect for the thoughts of others. The prohibition against plagiarism and cheating is intended to foster this independence and respect.

Plagiarism is the unacknowledged use of another person's labor, another person's ideas, another person's words, another person's assistance. Normally, all work done for courses -- papers, examinations, homework exercises, laboratory reports, oral presentations -- is expected to be the individual effort of the student presenting the work. Any assistance must be reported to the instructor. If the work has entailed consulting other resources -- journals, books, or other media -- these resources must be cited in a manner appropriate to the course. It is the instructor's responsibility to indicate the appropriate manner of citation. Everything used from other sources -- suggestions for organization of ideas, ideas themselves, or actual language -- must be cited. Failure to cite borrowed material constitutes plagiarism. Undocumented use of materials from the World Wide Web is plagiarism.

Academic cheating is, generally, the thwarting or breaking of the general rules of academic work or the specific rules of the individual courses. It includes falsifying data; submitting, without the instructor's approval, work in one course which was done for another; helping others to plagiarize or cheat from one's own or another's work; or actually doing the work of another person.

The penalty for academic dishonesty can vary from receiving a reprimand and a failing grade for a particular assignment, to a failing grade in the course, to suspension or expulsion from the university. The penalty varies with the nature of the offense, the individual instructor, the department, and the school or college.

Students who believe that they have been unfairly accused may appeal through the school or college's academic grievance procedure.