Course Description
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. Sociologists need a basic foundation in statistics so they can critically evaluate others’ arguments as well as avoid mistakes when we conduct our own research.

This course introduces statistical techniques appropriate for answering sociological questions. We will cover both descriptive and inferential statistics. Descriptive statistics describe or summarize sets of numbers. Inferential statistics use sample data to make estimates about the wider population of interest (for example, using surveys to find out which candidate will win an election, whether or not voters will recall a governor, what’s the most popular TV show in America, etc). This course will cover statistics that 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 differences between income for men and women, and whites, blacks, and Latinos?).

This course has a mandatory lab component where you will learn how to use SPSS, a statistical software package commonly used in academic, business, and non-profit research. The lab location and meeting times are listed at the top of this syllabus.

No prior knowledge of statistics is assumed but students must have a good understanding of algebra. If you have never had a course in algebra at the high school level or above, you should consider taking one before taking this course.
Course Materials

A coursepack for this class is available at Ritter Hall 234. It contains my Powerpoints, practice problems, data codebooks, and statistical tables you will need for this class.

You should obtain a calculator for exercises we do in and out of class and exams. A cheap scientific calculator will be sufficient. YOU SHOULD BRING YOUR CALCULATOR WITH YOU TO EVERY CLASS SESSION. You will not be allowed to use cell phone calculators on the tests.

The content of this class will rely on class lectures and PowerPoint slides, which are provided on Blackboard. I will also post practice problems to Blackboard to help you study the material.


Requirements

*Exams*—We will have three exams during the session. Exam I is on Thursday, September 27; Exam II is on Thursday, November 1st; and Exam III is on Tuesday, December 11th from 10:30am-12:30pm. I will provide the necessary formulas so you do not need to engage in excessive memorization. The exams are semi-cumulative—it will 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.

*Lab Assignments*—To hone your statistical skills and make you feel more comfortable using statistics, I will require that you complete 10-11 assignments throughout the semester. We will drop the 2 assignments with the lowest score when we calculate your final grade. These assignments will require you to do operations in SPSS and interpret your results.

Late assignments will not be accepted under any circumstances (that includes computer glitches causing you to lose your assignment).
Attendance-- We expect you to attend all lectures and labs. Material will be covered in class and lab that is not available in the lecture notes. We will take attendance at the beginning of every class and lab. Starting 9/4, you have two “free” absences that can be used for emergencies, religious holidays, or whatever. Attendance is worth 4 percent of your grade.

You are responsible for obtaining materials covered in class and lab as well as any special announcements made in class about changes in the course schedule or course policies.

In-Class Technology--It is hard to imagine life without laptops and cell phones. While these devices can be excellent for finding, sharing, or storing information, they can also be distractions. For this reason, all cell phones should be turned off or silenced (including vibration) before the beginning of class. Further, if you are texting or doing any other activity that looks like texting, such as playing games, you will be asked to put your phone away and you will be counted as absent for that day.

Because you will have coursepacks with space to take notes on the classroom material, I see no need for laptop computers.

<table>
<thead>
<tr>
<th>Final Grade Breakdown</th>
<th>Final Grade Cutoffs</th>
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<tbody>
<tr>
<td>Computer Assignments (8 or 9)</td>
<td>48%</td>
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<tr>
<td>Exams (3)</td>
<td>48%</td>
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<tr>
<td>Attendance</td>
<td>4%</td>
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<tr>
<td><strong>A</strong> 93 - 100</td>
<td><strong>C</strong> 73 – 76.99</td>
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<tr>
<td><strong>A-</strong> 90 – 92.99</td>
<td><strong>C-</strong> 70 – 72.99</td>
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<tr>
<td><strong>B+</strong> 87 – 89.99</td>
<td><strong>D+</strong> 67 – 69.99</td>
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<tr>
<td><strong>B</strong> 83 – 86.99</td>
<td><strong>D</strong> 63 – 66.99</td>
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<tr>
<td><strong>B-</strong> 80 – 82.99</td>
<td><strong>D-</strong> 60 – 62.99</td>
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<tr>
<td><strong>C+</strong> 77 – 79.99</td>
<td><strong>F</strong> &lt;60.00</td>
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Computing—You do not need to buy any software to do well in this course.

We will be working in a computer lab for the lab sessions, so you will need an Temple user id to log on the computers (see http://www.temple.edu/cs/accessnet.htm for information on getting Temple computing accounts).

We may have to make special announcements outside of normal class hours via e-mail or Blackboard, so we strongly suggest you check Blackboard and your e-mail account daily.
Course Schedule (subject to change as we progress through the semester):


<table>
<thead>
<tr>
<th>Week</th>
<th>Days</th>
<th>3201 Topics</th>
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| 1    | 08/28-08/30| Introduction (problem 1)  
Data & Variables (problems 2-7)  
LABS START FRIDAY, 9/1  
LAB01: INTRODUCTION TO SPSS |
| 2    | 09/04-09/06| Univariate Statistics: Graphs (problems 8-13; Chap. 1/1/1/1)  
Univariate Statistics: Central Tendency & Dispersion (problems 14-23; Chap. 2/2/2/2)  
LAB02: GRAPHS |
| 3    | 09/11-09/13| Univariate Statistics: Central Tendency & Dispersion  
Univariate Statistics: Normal Distribution (problems 24-31; Chap. 3/3/3/3)  
LAB03: CENTRAL TENDENCY, DISPERSION, NORMAL DISTRIBUTION |
| 4    | 09/18-09/20| Bivariate Statistics: Causal Reasoning (problems 32-34)  
Bivariate Statistics: Basic Comparisons (problems 35-38)  
LAB: REVIEW SESSION |
| 5    | 09/25-09/27| Bivariate Statistics: Two-Way Tables (problems 39-46; Chap 6/6/6/6)  
EXAM01 THURSDAY, 9/27  
LAB04: BASIC COMPARISONS |
| 6    | 10/02-10/04| Bivariate Statistics: Two Quantitative Variables (problems 47-54; Chap. 4-5/4-5/4-5/4-5)  
LAB05: TWO-WAY TABLES |
| 7    | 10/9-10/11 | Sampling Distributions (problems 55-61; Chap 10/11/11/11)  
LAB06: REGRESSION |
| 8    | 10/16-10/18| Confidence Intervals (problems 62-68; Chap. 13/14/14/14)  
Hypothesis Testing (problems 69-75; Chap 14/15/14/15)  
LAB07: SAMPLING DISTRIBUTIONS |
| 9    | 10/23-10/25| Hypothesis Testing  
The $t$ distribution (problems 76-80; Chap. 16/18/17/18)  
LAB: REVIEW SESSION  
10/23 LAST DAY TO WITHDRAW |
| 10   | 10/30-11/01| The $t$ distribution  
EXAM02: THURSDAY, 11/01  
LAB08: CONFIDENCE INTERVALS |
| 11   | 11/06-11/8 | Comparing Two Means (problems 81-82; Chap. 17/19/18/19)  
Chi-Square Tests (problems 83-87; Chap. 20/23/22/23)  
LAB09: T-TEST |
| 12   | 11/13-11/15| Inference For Regression (problems 88-89; Chap. 21/24/23/24)  
Regression With Categorical Variables (problem 90)  
LAB10: CHI-SQUARE |
Disability Statement: This course is open to all students who met 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 to coordinate reasonable accommodations for students with documented disabilities.

Statement on Academic Freedom: Freedom to teach and freedom to learn are inseparable facets of academic freedom. The University has adopted a policy on Student and Faculty Academic Rights and Responsibilities (Policy # 03.70.02) which can be accessed through the following link: [http://policies.temple.edu/getdoc.asp?policy_no=03.70.02](http://policies.temple.edu/getdoc.asp?policy_no=03.70.02).


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.