

Statistics for the Behavioral Sciences

Department of Psychology

New York University

Class meets: T & R 9:30-10:45, Cantor 102

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V89.0010

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4 Points

Section 001

Phone: 212-998-3866**Office Hours:** M,W & R 11:00-12:30 or by appointment**Materials:** Cohen, Barry. (2008). Explaining Psychological Statistics (3rd ed). Wiley & Sons.**Calculators:** A scientific calculator is required (preferably Texas Instruments or HP; graphing calculator is unnecessary). **You must be able to calculate standard deviations with your calculator.** Calculators should always be brought to lab. Solar powered is preferable.**Course goals:** This course aims to provide psychology majors with tools for evaluating data from different kinds of studies, in preparation for department lab courses. Students will work on examples of data sets, learn approaches to problems of statistical prediction, and learn the application of statistical reasoning to decision making. Students will learn to analyze data using SPSS and how to write up results in APA format.

At the end of the term, students will be familiar with data description, variance and variability, significance tests, confidence bounds, tests of differences of means, correlation of variables, linear regression and nonparametric tests.

Requirements: Grades will be based on textbook homework, SPSS computer assignments and lab participation (27% of grade), best three out of four quizzes (48% of grade), and a final exam (25% of grade). It is essential that students do not fall behind in homework and review of course material; homework and computer assignments will be down-graded if turned in later than the day due (please see SPSS Rules posted on Blackboard), and will not count if turned in later than one week past the due date. **Quizzes cannot be made up but your lowest quiz score will be dropped.****Recitation:** During recitation, students will be taught how to use SPSS for data exploration and analysis and how to report results in APA style format. Students will also be able to get assistance from their TA for homework problems or any other class problems. In addition, TAs will have office hours so that they are available to students outside of class time. **Note: Labs meet in 194 Mercer, room 304 or LC19, in the Tisch building.****Research:** The Psychology department requires that students complete 2 hours of participation in research studies. Students who fail to fulfill this requirement receive an incomplete in the course until it is completed. There is no extra credit for extra research hours.

Week	Date	SPSS due	Day	Topic/Activity (Handout # in parentheses) [Reading adjustments in square brackets]	Chapter	
1	1/25 1/27		T R	Intro to psych statistics (1 & 2) [no C in ch 1] Frequency tables, graphs and distributions (2)	Ch 1 & 2 Ch 2	Labs do not meet
2	2/1 2/3		T R	Measures of central tendency and variability (3) Ch 3 cont'd [to pg 79 mid]	Ch 3 Ch 3	1) Variables, graphs, data entry; intro to SPSS
3	2/8 2/10		T R	Standardized scores and the normal distribution (4) Ch 4 cont'd [in C only Central Limit Theorem]	Ch 4 Ch 4	2) Central tendency, variability, standard scores
4	2/15 2/17	SPSS#1	T R	Intro to hypothesis testing; one group z-test (5) Interval est and the t distribution (6) [no C]	Ch 5 Ch 6	3) Normal distribution; hypothesis testing
5	2/22 2/24		T R	Quiz #1 (ch 1-4) Handouts 1-4 t-test for two independent sample means (7) [no C]	Ch 7	4) One group t-tests and confidence intervals
6	3/1 3/3	SPSS#2	T R	Statistical power & effect size (8) [no C] Power continued (8)	Ch 8 Ch 8	5) Two group t-tests; power and effect size
7	3/8 3/10		T R	Linear Correlation (9) [no C] Linear Regression (10) [no C]	Ch 9 Ch 10	6) t-tests in SPSS; correlation
8	3/22 3/24		T R	Quiz #2 (ch 5-8) Handouts 5-8 Regression continues (10)	Ch 10	7) Linear regression
9	3/29 3/31	SPSS#3	T R	Matched t-test (11) [no C] One-way indep. ANOVA (12) [omit 362-365; no C]	Ch 11 Ch 12	8) Matched t-test; one-way ANOVA
10	4/5 4/7		T R	Multiple Comparisons (13) [not pg 408 on] Linear Contrasts (13)	Ch 13 Ch 13	9) Multiple comparisons; linear contrasts
11	4/12 4/14		T R	Quiz #3 (ch 9-11) Handouts 9-11 Two-way ANOVA (14) [omit 449-452; 454-456; no C]	Ch 14	10) Two-way ANOVA
12	4/19 4/21	SPSS#4	T R	Interactions (14) Repeated measures ANOVA (15) [omit 503-505; 508-509; no C except for counterbalancing]	Ch 14 Ch 15	11) One and Two-way ANOVA review
13	4/26 4/28		T R	Repeated measures ANOVA continued (15) Quiz #4 (ch 12-14) Handouts 12-14	Ch 15	12) RM ANOVA
14	5/3 5/5	SPSS#5	T R	Chi-Square (16) [not pg 721 on] Final Review	Ch 20	13) Chi-square & review

Final Exam: Tuesday, May 17th, 2011, at 8:00-9:50 am. Room to be announced.**The schedule is subject to change. Please check out all announcements & class changes on the class Blackboard site.**