Psychology 302 – Statistical Methods in Psychology
Summer 2012

Lectures are held Mondays-Thursdays from 1-2 pm in 275 Lillis

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Office Hours: Tuesdays 2-4, and by appt.

Labs are held on Fridays at 1 and 2 pm in 180 Straub

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OVERVIEW OF COURSE

Course Objectives: At the end of this course you will be able to read a description of a research study and then identify the appropriate statistical technique needed to answer the research question. You will be able to identify problems and issues with data sets through exploratory data analysis. You will be able to describe and evaluate data using summary statistics. You will be able to use inferential tests and measures of effect size (both computing by hand and using statistical software) to answer research questions and draw conclusions (written in APA style) based on your analyses. Using the knowledge you gain here, you should be better equipped to evaluate statistical information reported in popular media as well as in primary research articles. You will also gain the statistical knowledge to help you run your own study in PSY 303 (so make sure to save your materials).

Course Description: This class both is and is not really a math class. Although you will be learning how to do some statistical calculations by hand, this course is very different from courses taught in mathematics departments. The focus in this class is on a conceptual understanding of statistics and the application thereof to psychological science. In the past, most students have found that the actual "number crunching" in this class is relatively easy. It is the conceptual understanding of statistical techniques that is emphasized even when it comes to actual formulas.

COURSE REQUIREMENTS

Book: The required text is by Gregory Privitera (2011), *Statistics for the Behavioral Sciences*. I will make sure there is a copy on reserve at the library, but it will be greatly beneficial for you to have your own copy.

Other Materials: Your book should have come bundled with the StatLab Online program that will provide you with access to the course site. This course also utilizes iClickers for in-class participation. Clickers used for previous courses will work. Instructions for registering StatLab Online and Clickers are on blackboard. You will also need a hand-held calculator (nothing fancy; graphing capabilities aren't

necessary). **Bring your book and all materials to lecture.** You will not need your clickers in lab, but bringing your book will be helpful.

SPECIAL CIRCUMSTANCES

Students with Disabilities: If you have a documented disability and may need accommodations, contact me ASAP. Please let me know in advance, even if you are not sure that your disability will require accommodation (for example, if you have a physical disability that may require you to miss class, but you aren't sure it will). Students who are experiencing learning difficulties are encouraged to consult the Accessible Education Center (164 Oregon Hall; 541-346-1155; uoaec@uoregon.edu; website: aec.uoregon.edu). Without documentation, accommodations are not guaranteed and are to be made at the discretion of the instructor.

Student Athletes: You must let me know during the first week of classes if you will miss class due to travel with a UO athletic team and require accommodation. Requirements for the course will still be the same, however minor scheduling accommodations may be made (e.g., taking an exam a few hours early) if planned well ahead of time.

Other Students: If you are repeating this class, or have other circumstances that might affect your ability to devote time to the class, please let me know so I can discuss strategies to promote your success in this course.

GRADING

Participation via iClickers (10% of Grade): Participation includes in-class activities designed to increase understanding of concepts introduced in reading, topics discussed that day and reviewing previous concepts. There will be several of these scattered randomly throughout lectures during the course; some days there may not be any questions, some days there might be five questions. But be aware that I like to test how well you all understand the material; so don't bank on me not asking any questions. Participation points will not be based on whether you got the right answer, but only on whether you tried. To allow for technical glitches, bathroom breaks, etc., participation credit for a day will allow for missing one of each day's clicker questions. There is no opportunity to make up these points if you are absent or forget your clicker.

Homework (35% of Grade): Homework assignments are due **each week at the start of lab to your lab instructor (including StatLab problems which must be time stamped as complete by the start of lab.)** Some problems will be completed by hand, some using a statistical program called SPSS that you will learn in lab, and some within StatLab. **Make sure to turn in homework on time – Late Homework Policy: 20% point deduction for 1 day late (which comes into effect 15 minutes after lab begins), 50% for 2 days late, not accepted 3 or more days late.** Scheduling and content of homework are subject to change at the discretion of the instructor. An updated homework list will appear on Blackboard and changes to this list will be accompanied by Blackboard announcements. Please be sure your Blackboard settings allow you to receive these announcements.

Discussing homework with other students and your instructors is encouraged. However, **each student must submit a separate homework assignment, <u>written independently</u> (no photocopies, printing out multiple copies of SPSS, or word-for-word copying)**, and you must show your work for all by hand calculations. More explicitly, you may work together to solve problems and check your answers on

homework with each other, but preparing those answers for your homework and the actual writing of **any** answers need to be done independently. Copying homework assignments is a big pet peeve of mine, so please don't do it. I don't take kindly to it, and you will end up with a 0 for a copied assignment.

Exams (55% of Grade): There will be two **non-cumulative in-class exams** (each worth 15% of your grade) and one **cumulative final exam** (worth 25% of your grade) given during the final exam period, **Friday, August 17th at 1 pm**. You will be allowed to bring one page (double-sided) of **hand-written** notes to these exams. This sheet will be turned in with your exam.

Final grades will be based on the above weighted percentages of total possible points earned. Grades will be posted as expediently as possible on Blackboard so you can monitor your grade in the course and address any problems. Final grades will be assigned letter grades as follows:

Course grades based on percentage of points earned			
Grade	Percent	Grade	Percent
A+	*	C+	77-79.9
A	93-100	C	73-76.9
A-	90-92.9	C-	70-72.9
B+	87-89.9	D+	67-69.9
B	83-86.9	D	63-66.9
B-	80-82.9	D-	60-62.9
Anything below 60 will be an F			

*I will grant A+ grades only to students whose interest, dedication and performance is deemed exceptional.

COURSE SCHEDULE

Week (M-T)	Chapters to Read	Topic	HW Due
June 25-28	1, 2, 3	Introduction to Terminology, Variables, Exploratory Data Analysis, and Measures of Central Tendency	None
July 2-5 (no class on the 4th)	4, 5 (pp. 128-133), 6	Variability, Probability, and Z scores	HW 1
July 9-12	7, 8	**Exam 1: July 9 (Ch. 1-6)** Sampling Distributions, Hypothesis Testing, Z-test	HW 2
July 16-19	9, 10	One-Sample and Independent Samples T-test, Related Samples T-test	HW 3
July 23-26	11, 12	Confidence Intervals, One-Way Between-Groups ANOVA	HW 4
July 30-August 2	13, 14	**Exam 2: July 30 (Ch. 7 – Ch. 12)** One-Way Within-Groups ANOVA, Two-Way ANOVA	HW 5
August 6-9	14, 15 (pp. 472-490)	Two-way ANOVA, Correlation	HW 6
August 13-16	16, 17	Regression, Chi-Square	HW 7 (due at the Final Exam)
August 17		**Final Exam 1 pm**	