Psychology 302 – Statistical Methods in Psychology

Spring 2012

Lecture are held Mondays & Wednesdays at 8:30-9:50 in 146 Straub

Instructor: Carly Smith
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Office Hours: Wednesday 10-12p

Labs are held Monday and Tuesday in 180 Straub

Lab Instructors:

Bill Schumacher (Tues. 2-3:20 lab)
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Laura Kaehler (Mon. 12-1:20 & 2-3:20 labs)
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Office Hours: Monday 10-11:50

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.

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 this 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*.

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 for StatLab Online and Clickers are on blackboard. You will also need a hand-held calculator, nothing fancy (i.e., graphing capabilities) necessary. **Bring book and all materials to lecture (no need for clickers in lab).**

Note: Statlab will require a computer that has the ability to run Java applets and many of the activities are made easier with a spreadsheet program (e.g., excel, google docs, open office) that allows you to sort large amounts of data. Most of you will already have these programs on your computer but they are available on lab computers and you are not required to put them on your personal computer.

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 (15% 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 in most lectures. 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, daydreaming, etc., participation credit for a day will allow for missing one of the 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 SPSS, and some within Statlab. **Turn homework in on time - Late Homework Policy: 20% deduction for 1 day late, 50% for 2 days late, not accepted 3 or more days late.** Turning in all homework on time earns the benefit of dropping your lowest homework score. Scheduling and content of homework are subject to change at the discretion of the instructors. 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, *written independently* (no photocopies, printing out multiple copies of SPSS output, 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. It is at the lab instructors' discretion to penalize outright copying.

Exams (50% of Grade): There will be two **non-cumulative in-class exams** (each worth 15% of your grade) and one **cumulative final exam** (worth 20% of your grade) given during the final exam period, **Friday, June 15 from 10:15-12:15 am**. You will be allowed to bring one page (double-sided) of 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. A grade calculator (an excel file with these percentages programmed to compute current and projected final grades) will be available to you from the first week of term. 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			
	Percent		Percent
A+	97-100	C+	77-79.9
A	93-96.9	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

COURSE SCHEDULE

Week (M-W)	Chapters	Topic	HW Due
April 2-4	1 & 2	Introduction to Concepts, Scaling, & Visual Representations of Data	None
April 9-11	3 & 4	Central Tendency & Variability	HW 1
April 16-18	6 & 7	z-Scores & the Normal Curve	HW 2
April 23-25	8	**Exam 1: April 23 (Ch. 1-7)** Intro to Hypothesis Testing with Z-test	HW 3
April 30-May 2	9	One-Sample & Independent-Samples T-test	HW 4
May 7-9	10 & 11	Related-Samples T-test, Confidence Intervals	HW 5
May 14-16	12 & 13	Oneway ANOVA, Between and Within Groups	HW 6
May 21-23	14	Two-way ANOVA	HW 7
May 28-30	p. 472-490 & Ch. 16	**Exam 2: May 28 (Ch. 8-14)** Correlation, Regression	HW 8
June 4-6	17	Chi-Square	HW 9
June 11 or 12		No Class, Finals Week	HW 10
June 15		Final Exam 10:15 am	