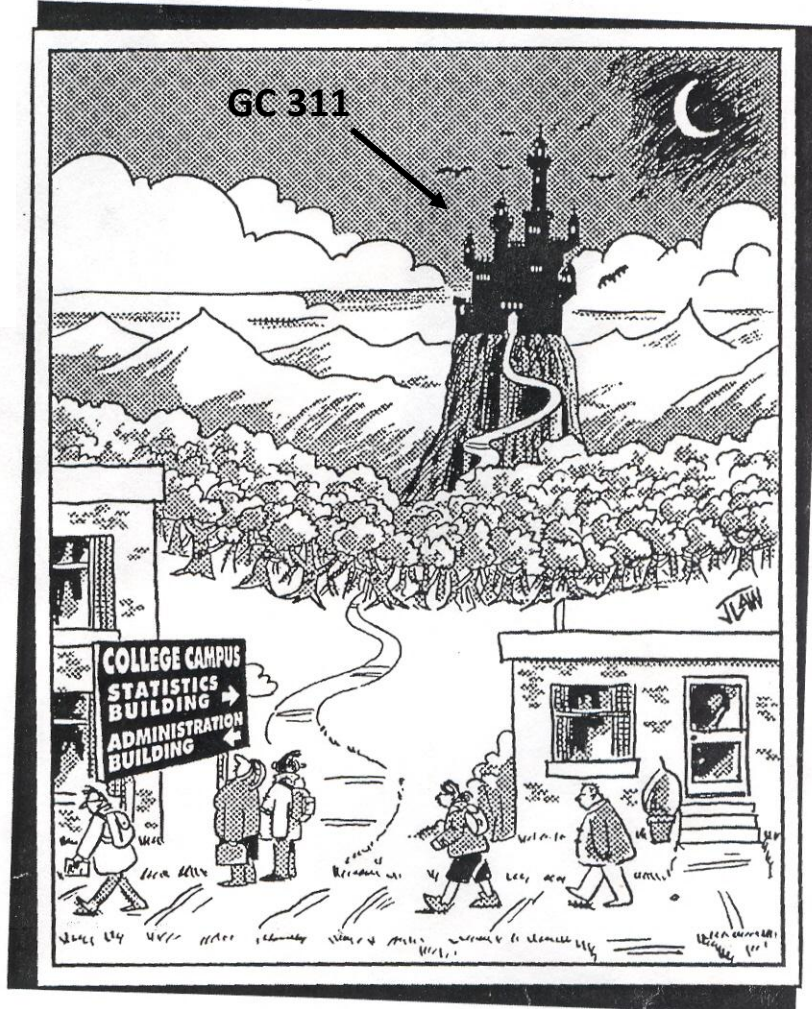


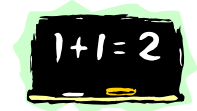
Yippee! I'm in Statistics

SNAPSHOTS





STATISTICS FOR PSYCHOLOGY



Psychology 3010
Spring Semester 2012

Instructor: Dr. Lynn White
Office hours: MWF 10:00-12:00
and Thurs. by appointment

Office: GC 308, 586 x 7913
Email: white_L@suu.edu

Pre-requisites: PSY 1010, PSY 2010 or instructor permission

Course Description & Objectives

This course introduces you to the magical and fascinating world of statistics. Together, we will explore the mathematical tools psychologists use to analyze and interpret their data... numbers which they later use to draw conclusions about human and animal behavior. Emphasis will be on the conceptual and the applied, rather than the rote memorization of formulae, theorems and calculations for which you have little use.

By the end of the course, you should be able to:

- 1) understand and interpret basic statistics commonly found in journal articles and books
- 2) critique the validity of the conclusions drawn by psychologists on the basis of their statistics
- 3) correctly identify which statistical test to use on a data set based on how the data was collected
- 4) personally conduct statistical analyses to discover “probable truths” about behavior
- 5) LOVE statistics... well, at least tolerate them...

Required Texts

White, L.H. (2006). Statistics for Psychology: A Survival Guide, 3rd ed. (July 2006)
White, L.H. (2011). A Picture Book Guide to PASW

Upcoming Attractions

Note that dates are not specified. I will try to give you at least 3 days notice before a test, but you can predict when they're coming based on what topic we're on.

Introduction & terminology
Graphs & the normal distribution
Measures of central tendency
Variability
Progress Test 1

The normal distribution & Z scores
Standard error of the mean
Confidence intervals
The t distribution
Progress Test 2

Hypothesis testing
Power & effect size
directional vs nondirectional tests
parametric vs nonparametric tests
Progress Test 3

T-tests
the F distribution
One-way ANOVA
Two-way ANOVA
Progress test 4

Chi Square tests (x2)
Correlation
Regression
Progress Test 5

Assignments

Throughout the semester you will be required to complete 10 PASW (also called SPSS) assignments. PASW is a computer software program used to analyze data. **I expect these assignments to be done on an individual basis.** Pretty well every computer on campus will allow access to PASW via the student server. We will not have time *in class* to learn how to use the software. However, I am more than happy to assist you during office hours, as is the TA we have for the class. In addition, the SPSS manual and accompanying videos (http://www.suu.edu/faculty/white_l/videos/) are intended to take you through the different analyses without the need for one-on-one “live” instruction. PASW assignments are due 3 days after they are assigned (not including weekends or holidays). Assignments handed in late will be penalized. Exceptions will be considered on a case by case basis. **Note that once an assignment has been graded and returned to the class, you may no longer hand in that assignment for points.** You are encouraged to turn it in regardless, so that we may give you feedback on your answers.

Quizzes

We will have a short quiz at the beginning of every class (except for the first day of instruction). The quiz will be on the material covered the class before. Each quiz is worth 5 points. Except for the first quiz, which is on this syllabus, a minimum 3 of the 5 points will come from the quiz bank questions at the back of your book. The answers I am looking for are the same as those in the quiz bank. Know them accordingly. **Quizzes may not be taken early.** You may take up to a maximum of **5 quizzes late.** If you miss a quiz, you must take it before the next class period. A 1/2 point penalty may apply. Exceptions to this are rare and will be considered on a case-by-case basis. I will count your best 20 quizzes and drop the rest. Graded quizzes will be returned to you the next class period whenever possible.

Progress Tests

Each progress test will be multiple choice format. Your textbook contains a test bank of questions for each progress test. 75% of the questions on each test will come directly from the test bank: 25% of the questions will be new. **Progress tests may not be taken early.** If you miss

a progress test, you will have **3 days** with which to make it up. A 1-3 point penalty may apply. A maximum of **two** progress tests may be taken late.

Each test will be administered at the testing center located in the basement (i.e. dungeon) of the ELC. You will have 2 consecutive school days to take a test. You must show up at least 1 hour before closing, or the testing center will not let you take it. Their hours are:

Mon., Wed., Thurs.....9-6
Tuesday.....9-8
Friday.....9-4

They will ask you for a photo ID

I generally try to get tests back to you a few days after you take them. After you take the test, you will be allowed to see your scantron and a copy of the test, both of which will be available from the psychology department secretary. You will be allowed to review them in the office only.

Late Quizzes and Tests

In the event you need to take something late, you **MUST** indicate the reason why on a late quiz/test form available from the psychology department secretary. S/he will then allow you to take the quiz/test in one of the department's offices.

PASW Test

During finals week, you will take a PASW test. For the PASW test, I will give you a data set, and you will have to run a 2 way independent ANOVA on it. I will then ask you questions based on the results of the analyses. The PASW test will be almost identical to assignment 8, but all of the assignments will help you prepare for it. The test will be held in one of the computer classrooms (probably in the ELC) on the date scheduled for our final exam. **This exam is open notes/book.**

Team Project

To give you the opportunity to apply what you have learned in class, students will work in groups of 4-5 on a project of their choice (once it's been approved by yours truly). Teams will come up with a set of related questions for which they collect data on. The questions need to be formulated in such a way that certain statistical tests must be conducted to answer them, the tests being: a t-test, a 1-way ANOVA, a chi square, and a correlation (or regression). You will also need to run some basic descriptive statistics (e.g. mean, standard deviation, standard error of the mean). Don't worry if you haven't got a clue what these terms mean yet... you will ☺ Just make sure that you collect data on at least three nominal/ordinal variables, and at least three interval/ratio variables. The results of the project will be presented on April 17th sometime between 4:00-6:00 p.m. at SUU's Student-Faculty Scholarship Day. Make plans now so that you can attend.

Teams will need to work on this project outside of class time, but the course's TA (and myself) will be available (and happy) to provide guidance.

Note: each team member must "pull their weight" on the project to receive credit.

“Last Chance to Pass” Make-up Exam & Supplemental Make-up Exam

Students MUST obtain an overall average of at least 80% on the five progress tests to pass the course with a 70% or better.* Should you not meet this criteria, in lieu of getting something less than 70%, you will be given the option of taking a make-up exam. This exam will be multiple choice format and comprehensive. It will be open book/notes, with no time limit. Students who do not get the minimum 80% average on the 5 progress tests AND who do not take the make-up exam will not receive anything greater than a D+ in the course. Their exact grade will depend on the grades earned on the other course requirements. The make-up exam (and supplemental make-up exam) can be taken any time within 3 weeks of the last progress test, during normal business hours when the psychology department is “open”. Note that this may require students to take an incomplete in the course until such time as the make-up exam(s) is(are) taken.

*Just because a student gets a minimum average of 80% on the 5 progress tests does not guarantee they will get 70% or better in the course.

Extra Credit (not to exceed 5% of your grade)

We will be taking more than 20 quizzes over the course of the semester. To encourage you to do well on every quiz and not miss any, I will calculate your average (out of 5) on the “extra” (i.e. dropped) quizzes. This mark will be added to your final grade in the course.

Attendance

Attendance of lectures is not required but **strongly recommended**. **Students who do not attend class on a regular basis should not expect to pass the course.**

Cell Phone Policy

As a matter of courtesy, please do not text during class. Cell phones can also be very disruptive to the class, *especially* if you answer them! Please turn your cell phone off during class. If you are expecting an emergency, put the cell phone on vibrate and politely excuse yourself from class to answer the call.

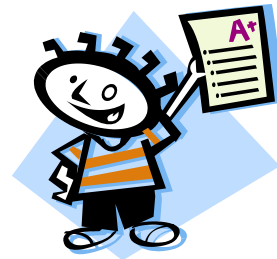
Grading

If get 80% or better on the 5 tests		If get less than 80% on the 5 tests And take the make-up test	
Quizzes	15%	Quizzes	15%
Progress Tests	60%	Progress Tests	30%
Assignments	10%	Assignments	10%
PASW test	10%	PASW test	10%
Team Project	5%	Make-up test	30%
		Team Project	5%
	* Total 100%		Total 100%

* A student who does not obtain an average of 80% or more on the 5 progress tests AND who does NOT take the make-up test CANNOT get more than a D+ in the course.

Your final grade in the course will be determined as;

A	93-100%	C	73-77%
A-	90-92%	C-	70-72%
B+	87-89%	D+	67-69%
B	83-86%	D	63-66%
B-	80-82%	D-	60-62%
C+	77-79%	Fail	00-59%



Note: Apart from the 10 PASW assignments and the team project, the only homework you have for this course is to STUDY!!! Count on spending 2 hours studying for every hour spent in class. That adds up to about 6 hours a week. DO IT. If you don't believe me, ask anybody who took this class last semester!!!

This Semester's TA

Greg will be available for extra help if you need it. He is NOT there to do your assignments for you, or to keep telling you if your assignment answers or right or wrong. Though, he will tell you if you're on the right track (we're not *that* heartless ☺)

Greg's e-mail: Gregorykrodgers@gmail.com

Office hrs: MTWRF 1:00-2:00 Greg's office is the couch in GC 308 ☺

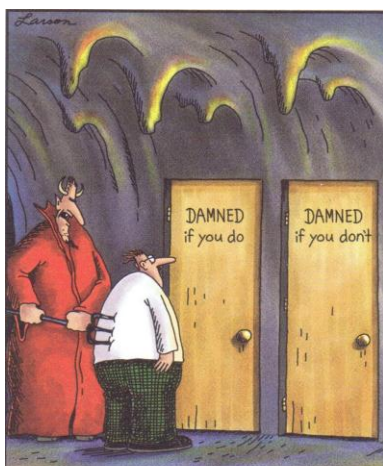
Weekly review: Fridays 1:00-2:00, place is TBA

PASW/SPSS lab help: Wed., Th. 2:00-3:00

Disclaimer

Information contained in this syllabus, other than the grading, late assignments, makeup work, and attendance policies, may be subject to change with advance notice, as deemed appropriate by the instructor.

Clerical errors can sometimes occur. ALWAYS keep an extra copy of any assignment you turn in as a back-up. Keep all graded materials returned to you until you have seen and agree with your final grade in the course.



"C'mon, c'mon—it's either one or the other."

Take Stats?

Don't take Stats?

Don't worry, it's really not as bad as the syllabus makes it sound!



Check your book to see if the following corrections have been made:

Stats Book

- p. 40 μ \bar{x} NOT \bar{x} \bar{x}
- p. 59 replace the word “precise” with the word “accurate”
- p. 128 each cell should have S1, S2, S3, S4, and S5
- p. 180 question should read... “What does the symbol “ σ^2 ” stand for?”
- p. 319 sample A $\bar{x} = 50$ (not 35)
- p. 351 some of you may be missing the table below

Crosstab

			RELIGION		Total
			LDS	other	
feeding preference	BF	Count	52	1	53
		% within feeding preference	98.1%	1.9%	100.0%
		% within RELIGION	68.4%	20.0%	65.4%
	FF	Count	24	4	28
		% within feeding preference	85.7%	14.3%	100.0%
		% within RELIGION	31.6%	80.0%	34.6%
Total	Count	76	5	81	
	% within feeding preference	93.8%	6.2%	100.0%	
	% within RELIGION	100.0%	100.0%	100.0%	

PASW/SPSS Manual

p.293 The second sentence should read; **The r squared value = .80, which means that 80% of the variability in calorie scores is accounted for by age.**

Because of time constraints, we will have to omit certain sections of the book. But BEWARE: although some pages from the book are omitted, everything we cover in class is fair game, even if it comes from one of the skipped sections. For example, I'm having you skip the pages that discuss 2 way mixed ANOVAs. But, I will tell you a little bit about them in class... you will be required to know the little bit that I do cover.

PLEASE NOTE THE FOLLOWING:

ADD: page 26 "Center of Gravity Box"

OMIT: page 26 the third property of the mean

page 105 stand alone F test to first half of page 106

page 107 2nd half (chef example) to bottom 3rd of page 108

page 122 tests of simple main effects to end of section on page 134

keep scrolling down for the "legal ease" ☺



STATEMENTS REQUIRED IN COURSE SYLLABI

[Per SUU Policy 6.36](#)

ACADEMIC INTEGRITY: Scholastic dishonesty will not be tolerated and will be prosecuted to the fullest extent. You are expected to have read and understood the current issue of the student handbook (published by Student Services) regarding student responsibilities and rights, and the intellectual property policy, for information about procedures and about what constitutes acceptable on-campus behavior.

ADA STATEMENT: Students with medical, psychological, learning or other disabilities desiring academic adjustments, accommodations or auxiliary aids will need to contact the Southern Utah University Coordinator of Services for Students with Disabilities (SSD), in Room 206F of the Sharwan Smith Center or phone (435) 865-8022. SSD determines eligibility for and authorizes the provision of services.

EMERGENCY MANAGEMENT STATEMENT: In case of emergency, the University's Emergency Notification System (ENS) will be activated. Students are encouraged to maintain updated contact information using the link on the homepage of the *mySUU* portal. In addition, students are encouraged to familiarize themselves with the Emergency Response Protocols posted in each classroom. Detailed information about the University's emergency management plan can be found at <http://www.suu.edu/emergency>

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