PSC 204A (Fall 2018) Statistical Analysis of Psychological Experiments

General Information:

Lectures:	Tu-Th	10-11:50am, Young Hall 166
Labs:	Fri	10- 12pm, Young Hall 188
		12-2:00pm, Young Hall 188

Instructor:	Emilio Ferrer eferrer@ucdavis.edu>	M 10-12am, Young Hall 174C
TAs:	Kristine O'Laughlin kolaughlin@ucdavis.edu	W 11-1pm, Young Hall 155
	Rui Jiang rjjiang@ucdavis.edu	U 2:30-4:30pm, Young Hall 266

Textbook: Howell, D.C. (2014). *Statistical methods for psychology* (8th ed.). Belmont, CA: Thomson.

Overview and Goals:
The purpose of this course is to introduce students to techniques for statistical analysis of psychological experiments.

The goals for students are: (a) to develop an understanding of the conceptual and mathematical bases underlying the statistics commonly used in psychological experiments, and (b) to learn how to apply statistical techniques to psychological data and properly interpret the results.

Requirements and Grading:

(1) Laboratory notebook assignments	(50% of grade)
(2) Midterm Exam	(20% of grade)
(3) Final Exam	(30% of grade)

1. Laboratory Notebook:
The notebook will contain weekly assignments. Each assignment will include questions designed to allow the student to demonstrate knowledge of the topics of the class and the readings and will consist mostly of data analysis and interpretation of results.

2. Exams:
Both exams will involve both abstract and computational elements.

Schedule:

Date	Topic	Reading
Sep 27	Introduction to course plans	-------
Oct 02	Describing and exploring data	Ch. 2-3
Oct 04	The Normal distribution	Ch. 4-6
Oct 09	Sampling distributions and hypothesis testing	Ch. 6, 8
Oct 10	Hypothesis tests applied to means	Ch. 12
Oct 16	Hypothesis tests applied to means (cont.)	Ch. 12-14
Oct 18	Simple analysis of variance	Ch. 16
Oct 23	Probability	Ch. 07
Oct 25	Review	
Oct 30	**Midterm I**	-------
Nov 01	Multiple comparisons	Ch. 16
Nov 06	Factorial ANOVA	Ch. 17
Nov 08	Factorial ANOVA (cont.)	Ch. 17
Nov 13	Repeated measures designs	Ch. 18
Nov 15	Analysis of covariance	Ch. 16-17
Nov 20	Correlation and regression	Ch. 09
Nov 22	**Thanksgiving Holiday** – No class/readings	
Nov 27	Correlation and regression (cont.)	Ch. 9, 10
Nov 29	Multiple regression	Ch. 11
Dec 04	Further topics in ANOVA, SEM, categorical data	Ch. 19, 20
Dec 06	General review: Questions and answers	

Final Exam