PS 211: Exam 2 Review Sheet

Exam 2 will focus on content from Lectures 5 - 9, though may also refer to concepts from Lectures 1 - 4. Please note that this is not a comprehensive list of what may be on the exam, but is intended to help guide your studying. You may bring a single 8.5 x 11" piece of paper with hand-written notes (both sides). You will ***not*** need a calculator for the exam.

Lecture 5: Hypotheses

Null vs. research hypothesis
Directional vs. non-directional hypotheses
One-tailed vs. two-tailed tests
Type I and Type II Errors

Lecture 6: Normal Curve, Standardization, Z Scores

Normal distribution
Standardization
Z scores & *z* distribution
Computing a *z* score
Transforming a *z* score back to a raw score
Z scores & percentiles
Distribution of scores vs. means
Central Limit Theorem
Standard error

Lectures 7 & 8: Hypothesis testing & *z* tests

Z tables (Standard normal distribution tables)
Using Z scores to test hypotheses (*z* tests)
Six steps of hypothesis testing
Critical values / cut offs
Alpha levels
P values
Point estimates vs. interval estimates
Computing confidence intervals for *z* tests

Lecture 9: Effect size, power, single-sample *t* tests

Effect size & computing Cohen's d
Statistical power - what is it and how to increase it (not how to compute it)
Parametric vs. non-parametric statistics (assumptions of parametric statistical tests)
t distributions
Computing a *t* statistic & conducting a single-sample *t* test
Degrees of freedom
t tables