STAT 511 Review for the Final Exam

Final exam will be 8-10am, Wednesday, December 15, BRWN 1154. You are allowed to bring (a) a calculator, and (b) one formula sheet of letter size (8.5in by 11in) which can be double-sided. Note you **cannot** bring two single-sided sheets.

There are about 50% problems from the first 6 chapters and 50% from chapters 7-9. Use the review for the midterm for chapters 1-6.

Chapter 7

Confidence intervals for $μ$: large sample and small sample; distributional assumptions needed; z-interval and t-interval; sample size necessary for a given length of CI.

Confidence interval for $p$

Confidence intervals for $σ^{2}$ and $σ$

Interpretation of confidence intervals

Chapter 8

Basic concepts: null hypothesis, research hypothesis, type I error, type II error, significance level

Tests about $μ$: Large sample with known $σ$ and with unknown $σ$; small sample (t-test)

 Calculation of probability of type II error, i.e., $β$.

 Determination of sample size.

Tests about $p $

p-value: calculation and interpretation

Chapter 9

Confidence intervals for $μ\_{1}-μ\_{2}$: large sample case;

Hypothesis testing for $μ\_{1}-μ\_{2}$: large sample case; p-value

Confidence intervals and hypothesis testing for $μ\_{1}-μ\_{2}$: the small sample case;