STA - 2122
Review for Final Exam

The Exam is on Thursday, April 28 at 9:45 AM. The exam is cumulative will cover **everything covered in class** from Chapter I to Section 8.5. The exam will be divided into two sections, a closed book part worth roughly 30% of the grade and an open book part worth roughly 70% of the grade. THE EXAM WILL HAVE A DURATION OF TWO HOURS AND WILL BE IN RDB 1100.

**For the Open Book Part:** This part be similar to your homework problems, examples in class. **This part will cover only chapters 6, 7 and 8.**

**For the Closed Book Part:** This part will test you on definitions and the basic understanding of concepts for this part. As before, know all possible definitions for this part and be prepared to do simple calculations. This part will also focus on the new material, but not as much as the open book part. To study effectively for this part, look at the review sheets for the previous exams (review for the short answer part in those exams). Also study all the previous exams. For the newer material, concentrate on:

1) The Central Limit Theorem. Besides knowing the large sample distribution of $\bar{x}$, know the distribution of $\frac{\bar{x} - \mu}{s/\sqrt{n}}$ for small n. Also know the sampling distribution of $\hat{p}$.

2) Properties of a good estimator - unbiasedness and small error. Know and understand the definitions of these properties.

3) Definition of a point estimate.

4) Meaning of a confidence interval, why we need it, interpretation of a C.I., definition of a confidence level etc. Know also the relationship between the width of the interval and the following: sample size, confidence level and the variance.

5) The various errors that can be committed during hypothesis testing. Know how we represent the probabilities of these errors, relationship between these probabilities and how we can decrease them etc.

6) Be able to interpret a p-value.