

STAT 110
FINAL EXAM REVIEW

GENERAL SUGGESTIONS:

1. Study the practice problems and homework assignments.
2. You can fill one side of an 8 ½ x 11 sheet of paper with formulas/examples/definitions. In addition, you will also be provided with the *Analysis Summary* sheet.

CHAPTER 4

- Understand the concepts behind measures of center (i.e., the mean and median)
- Understand the concepts behind measures of variation (i.e., the range and standard deviation)
- Know how to interpret graphical summaries such as dot plots, boxplots, and histograms

CHAPTER 5

- Carry out a hypothesis test for a single population mean:
 - Know how to check the assumptions behind the test
 - Know how to carry out the test based on JMP output
- Find AND INTERPRET a confidence interval for a single mean from JMP output.

CHAPTER 6

- Carry out a hypothesis test for a difference in two population means:
 - Know how to identify when samples are dependent vs. independent
 - Carry out the test for dependent samples based on JMP output
 - Carry out the test for independent samples based on JMP output
 - Understand the assumptions for each of these tests
- Find AND INTERPRET the confidence interval for a difference in two means from JMP output.
 - Dependent samples
 - Independent samples

CUMULATIVE PORTION

- Identify populations of interest
- Identify variable types (categorical vs. numerical)
- Identify the name of an appropriate analysis
- Identify predictor and response variables
- Understand the difference between designed experiments and observational studies and the impact the design has on the conclusions you can make
- Make appropriate conclusions based on results of hypothesis tests
- Understand the concept of a p-value (this includes interpreting the p-value in the context of the problem and estimating p-values from simulation studies)