STAT 200

EXAM2 OVERVIEW

Fall, 2004

You may bring a single sheet of paper with as many notes on it as you can fit front and back. **It must be your paper and not a photocopy of someone else's notes**. The exam will contain the handout I gave that gives all the formulas (be familiar with this sheet so you know how to use it) I will supply all statistical tables needed (Z and t-distributions).

The Exam will consist of the following

- 25 True/False or Multiple Choice 3 pts each — 75 pts
- Two data problems with multiple questions involving Hypothesis Tests and C.I. for a single mean and a difference of proportion — 10 and 15 pts each

The Exam Covers

- Chapter 6
- Chapter 7
- Chapter 8
- Chapter 9 - for correlation and regression, all you need is the basics - how to interpret the coefficients, the correlation matrix, and how to predict a value from the regression equation. Very little of the exam will be on these topics.
- Modules 9 through 15 and Handouts

Terms and Concepts to Know

- Sampling distributions
- Central Limit Theorem
- Sampling Distribution of the mean
- Inferences based on a single large sample for the mean and for proportions using a Confidence Interval
- Inferences based on a single small sample for the mean using a Confidence Interval
- Bound of Error
- Parts to computing a % C.I.
- The meaning of a Confidence Interval
- t-distribution and degrees of freedom
- Inferences based on a single large sample for the mean and for proportions using a Hypothesis Test
- Inferences based on a single small sample for the mean using a Hypothesis Test
- Alpha and Type I Error
- Type II Error (only in terms of its meaning, not in terms of calculating it)
- Parts of a Hypothesis Test - Null Hypothesis, Alternative Hypothesis, Assumptions, Test Statistic, Rejection Region and the Critical Value of z or t, Conclusion
- One and Two-Tailed Hypothesis Tests
- Observed significance or p-value
- Comparing Two Means - Hypothesis Test for Large sample, small sample,
- Comparing Two proportions - Hypothesis Test for Large sample
- Confidence Interval for the Difference of Two Means or Proportions - Large and Small Sample
- Paired Difference Test
- Understanding Excel output for the difference of means tests
- Measures of Association - basic criteria
- Correlation coefficient - be able to interpret it
- Correlation Matrix - be able to read it
- Covariance
- The equation of a line
- Independent and dependent variables
- The regression output - know how to read the regression output from Excel
- Be able to predict a value of Y from the equation and a given value of X