

Stat 401, Section F: Preparation guide for Exam 2

- You should bring only a calculator and pen/pencil to the exam
- You will be given a clean formula sheet and necessary tables
- The exam will cover Chapters 5-10 (skip sections 9.4–9.6 and section 10.4) , Homeworks 6-10, and lecture materials through 11/5. This includes:
 - Model, assumptions, tests and 1-way ANOVA for differences among I means
 - Testing for linear combinations of means
 - Multiple comparison tests and intervals (why we use these procedures, how to interpret them, Bonferroni and Tukey-Kramer methods)
 - Linear correlation coefficient
 - Simple and multiple linear regression models, assumptions, least squares estimates of population regression parameters
 - Testing and ANOVA for regression model parameters
 - Confidence intervals for mean of Y given X, prediction interval given X for an individual unit, and confidence bounds for population regression line
 - Deviations from assumptions for *simple* linear regression and tools/plots for diagnosing problems
 - Transformations and interpretation of results for the log transformation
 - Extra sum of squares approach to comparing models
 - Indicator variables and interaction
 - Interpreting SAS and **R** code output