Master of Applied Statistics
Comprehensive Exams
January 2019
Format and Topics

The MAS comprehensive exams are two 4-hour closed-book exams that are offered each January and May. They do not both need to be taken during the same offering. Students living within a three-hour drive of Columbia are asked to take the exam on the USC campus in the LeConte building at the designated dates / times, if at all possible (see below). Others must arrange for an approved proctor, coordinating with Shannon Carson (scarson@mailbox.sc.edu) and take the exam in the window from Wednesday, January 9th – Tuesday, January 15th.

If you intend to take either exam, you MUST email Brian Habing (habing@stat.sc.edu) at least a week in advance (after working out the details with Shannon Carson) to let us know when and where you plan to take it.

Exam I will take place 12:45-4:45pm on Thursday, January 10th and will cover topics in the mathematical statistics sequence STAT 702-703. This theory portion of the comprehensive exam covers:

- Basic probability concepts
- Discrete probability distributions
- Continuous probability distributions
- Joint distributions
- Sampling distributions, including the Central Limit Theorem
- Point Estimation
- Hypothesis testing
- Bayesian Inference

There will be six questions and you must choose five (and only five) to answer. You will be given formula sheets as well as t, chi-square and F tables; these sheets and tables have already been posted for your perusal. You should bring a non-programmable, non-graphing calculator.

Exam II will take place 12:45-4:45 pm on Friday, January 11th and will cover topics in the statistical methods sequence STAT 700-701. This applied statistics portion of the comprehensive exam covers:

- Inference for one and two sample problems about means and variances, including nonparametric methods for means.
- Inference for proportions: one-sample, two-sample, and contingency tables
- Simple linear regression
- Multiple regression and logistic regression
- One-factor ANOVA and multiple comparison methods
- Multi-factor ANOVA and ANCOVA

There will be six questions and you must choose five (and only five) to answer. You will be given formula sheets as well as t, chi-square and F tables; these sheets and tables have already been posted for your perusal. You should bring a non-programmable, non-graphing calculator.