

## Guidelines for the Aug 2019 Applied Statistics Qualifier

### STA 590

#### 1. Textbook

Applied Linear Statistical Models, 5th edition, by Kutner, Nachtsheim, Neter, and Li

#### 2. Chapters Covered

- a. Chapter 12.1 thru 12.5 Autocorrelation in Time Series Data
- b. Chapter 13.1 thru 13.5: Nonlinear Regression. Neural Networks are NOT covered.
- c. Chapter 14.1, 14.3 thru 14.10: Logistic Regression.
- d. Chapter 16.1 thru 16.8: Single Factor Studies (One Way ANOVA)
- e. Chapter 17.1 thru 17.7: Analysis of Factor Level Means
- f. Chapter 18.1 thru 18.3, 18.5, 18.6 : ANOVA Diagnostics
- g. Chapter 19.1 thru 19.10: Two-Factor Studies
- h. Chapter 21.1 thru 21.5 Randomized Complete Block Designs
- i. Chapter 22.1 thru 22.3 Single Factor Analysis of Covariance

This is a closed book exam with no textbook, notes, or internet assistance. A graphing calculator is permitted similar to a TI-83 or TI-84. Scratch paper will also be provided.

There will be three problems each with their own data set. These data will be presented in an Excel Spreadsheet format and will be provided to the student at the start of the exam. The student may use either Minitab or SAS for the analysis.

Students will include their software output, any written software programs, and analysis answers so the committee can see exactly what steps were taken to arrive at the results. Students will be graded on selecting the correct analysis procedures, using proper analysis techniques for that procedure, and clearly stated responses to the questions. The student's submission should be organized such that each problem is presented, with appropriate supporting documents, separately collated.