**Project Assignment STAT 502 WD**

The individual projects are intended to give you a chance to work with ANOVA in a setting of interest to you. The task is to find or generate a dataset and run an ANOVA. Note: if you elect to generate data for your project, you must put ‘Simulated Data’ somewhere in the title.

**Choice of Topic** is up to you. A dataset from your current employment, graduate research, a hobby, or other internet source will work. Just be sure to give credit (reference) for where the data came from.

**Format:** The project should be submitted to the Project Dropbox in ANGEL. It can be a Word document or pdf file and should be 3-5 pages in length. To facilitate this, Data, Software codes, and Computer Output should be in Appendices at the end of the document. Please use a Times New Roman Font and size 12 for the manuscript. Sections could include (but are not strictly required to be)

Executive Summary (required) –

* Type of study (designed experiment or observational study), and data source,
* variable description (categorical or continuous, fixed or random),
* the treatment design, (crossed vs. nested)
* randomization (experimental design),
* significant results.

Introduction – Statement of the problem and Hypotheses to be tested

Methods – Describe data collection (or generation), treatment design, experimental design, ANOVA model and mean comparison methods used. Document the source of the data and the software you use.

Results – Conclusions regarding specific hypotheses and selected ANOVA output to support statements of results of tests. This section **must** include graphical results – plots of means, standard errors, and results of mean comparisons (where justified by significance in the ANOVA), as we have prepared in lecture, homework, and exams.

Conclusion – Overall statement of the results of the Study. In this assignment you may only be running a single ANOVA and there may be no need to re-iterate what you wrote in the Results section.

Professionalism: Include a Title at the top of the first page. Be sure to cite references you may use in the manuscript and the source of data if its published. Check grammar and spelling before submitting.

**\*** Grading will be based **not** on the size or complexity of either the dataset or the statistical model for the ANOVA. Rather, a thorough (e.g. EDA, diagnostics), correct analysis, completeness (e.g. a fully labeled bar chart of the means with text interpretation) and professionalism will count toward the grade for this assignment.

There is no requirement to have your project pre-approved by the instructors, but feel free to obtain feedback by posting your ideas to the discussion board where everyone can review your ideas and provide feedback.