

Instructions: Each assignment is worth 10 points regardless of difficulty. There will be **four** assignments. The lowest grade will be dropped. The problems for assignments will be assigned by the instructor.

Assignment 1: One-Way ANOVA

Assignment 2: Factorial ANOVA

Assignment 3: ANCOVA

Assignment 4: Repeated Measures ANOVA

Because problems are graded, each student is expected to **independently** do his or her own work. Questions concerning the problems are to be directed to the instructor. Please try to limit your report in one page. Only the results and discussion/conclusions will be reported following the APA style.

In the result section, provide support and/or justification for your conclusions. Support can take the form of analysis of variance table, results of auxiliary test, a graph or figure, or reference to appropriate computer output. In presenting results use a consistent, but not an excessive, number of decimal places. If computer output is used, it must be clearly labeled so that supporting evidence is readily identified. It is best to provide only that portion of the computer output required to support your conclusions. Do not overanalyze the data. Please submit the computer output in a separate file. The computer output will not be graded, but it helps the instructor to identify problems if any.

Guidelines for Project:

For the Project, please choose a statistical tool from the following:

Factorial ANOVA

ANCOVA

Repeated Measures ANOVA

Select a problem and a data set from your field of interest. I encourage you to choose a problem directly related to your discipline. However, a problem which is of interest to general audience will be also acceptable (e.g., data found in the newspaper). You may use fictitious data (as a last resort), but if so, you must come up with "plausible" data which is consistent with existing knowledge. Concocting data is not easy. An example of using fictitious data would be a practice run for your upcoming dissertation. You may be able to find data in research articles, statistics books, research oriented books in your field, almanacs, newspaper, and so forth. Another alternative is to give a small survey and collect your own data.

The problems and data sets you choose must be comparable to those found in Assignment problems. In other words, the problem should be about a paragraph and the data set is fairly small. If you have an access to large data and it is beneficial for you to use it, it would be also acceptable. Please follow the format described below carefully. There are two reasons for the uniformed format:

1. Fairness in grading
2. Development of the problem bank. Your problem and data may be used in the future statistics class. If you do not want your problem and data to be used anywhere else. Please make a note.

Format:

1. Written Report

Cover Page: Limit to one page, if possible. Use the bottom half of the paper for the problem and data. Use the upper half of the paper for identifying the following information:

1. Your name, discipline area
2. Title of the problem
3. Area of the problem (e.g., Special Ed, CPS, General Interest, etc.)
4. Type of statistical analysis (e.g., ANCOVA, etc.)
5. Source of data. List the reference if the data are from a book, an article, and so forth. If the data are fictitious or you collected data, please mention so.

In the bottom half, state the problem and list the data in a concise manner.

Write-Up: Limit to less than two pages, if possible. Follow the APA format (Introduction, Method, Results, and Discussion). To save time/space for downloading, please use single space.

2. Presentation

Students are expected to present their Project via Collaborate. Please present using Power Point as it is the best media for Collaborate. Please be creative. The presentation will be about 15 minutes for each student.

Grading for Project

A+ (100)	Above and beyond expectation.
A (95)	As expected. Job correctly done. (Computer runs are correct. The write-up contains no error, etc.) A great presentation at Collaborate.
B+ (88)	Good job except some minor errors. (May include some careless errors, etc.) A great presentation at Collaborate.
B (85)	Acceptable. (Include some serious errors. Weak write-up, etc.) A great or acceptable presentation at Collaborate.
B-(80)	A good write-up but with no presentation at Collaborate.
Redo	Not acceptable. (May turn in again, but 5 points will be taken from the above grading.)