Project 2

1. To do this project you must have access to Microsoft Excel. If you don't have Excel on your own computer, it is loaded on all the computers in the SPPA student computer lab. Within Excel, you must also have installed the "Analysis ToolPak". To do this:

   Excel 2003: click Tools, Add-Ins, then check Analysis ToolPak and click OK.

   Excel 2007/2010/2013: click File, Options, Add-Ins, then click Analysis ToolPak and click OK.

   Mac versions prior to 2008: click Tools, Add-Ins, then check Analysis ToolPak and click OK.

   Mac versions since 2008: you must install StatPlus:mac LE, which you can download free from http://www.analystsoft.com/en/products/statplusmacle/.

2. Create a spreadsheet document in Excel. Use the Data Validation tool (click Data, Data Validation) to set the data range for all cells except the first row and first column as 15-50. Then enter into three columns the following data:

Participant	Group 1	Group 2	Group 3
SUBJ01	40	28	17
SUBJ02	26	22	28
SUBJ03	26	25	26
SUBJ04	21	24	16
SUBJ05	43	26	20
SUBJ06	19	27	23
SUBJ07	38	22	19
SUBJ08	20	27	28
SUBJ09	21	27	21
SUBJ10	27	27	16
SUBJ11	18	16	15
SUBJ12	44	17	21
SUBJ13	20	28	15
SUBJ14	20	19	24
SUBJ15	18	24	16
SUBJ16	24	15	25
SUBJ17	26	19	21
SUBJ18	43	23	27
SUBJ19	40	16	15
SUBJ20	32	20	23

3. Use the top row (Row 1) to label your columns with the group names. Use the leftmost column (Column A) to label your participants by number.

4. Use the Conditional Formatting tool (click Home, Conditional Formatting) to highlight those data cells with values <21.

5. To the right of the data columns created three more columns and label them Group 1 %ile…Group 3 %ile. Use the formula PERCENTRANK.INC to calculate the percentile rank of each score within its group.

6. Use the Data Analysis Tools (click Tools, Data Analysis) to produce each of the following analyses in a separate, labeled worksheet:

   - Descriptive Statistics (summary statistics, 95% confidence interval)
   - Histogram of Group 1 data (chart the output, making the chart's endpoints the minimum and maximum values)
   - T-test for correlated (paired) samples of Group 1 and Group 2 data
   - Single factor ANOVA of Group 1, Group 2, and Group 3 data
   - Pearson correlation of Group 1, Group 2, and Group 3 data

7. Use the Data Analysis Tools to create a count of how all three groups' scores distribute into low (15-24), medium (25-34), and high (35-44) groups. Then use the Insert/Chart menu option to create a pie chart showing this distribution.

8. In a separate worksheet enter the following data:

	Men	**Women**
Agree	35	58
Neutral	25	11
Disagree	23	10

9. In the cells below the response data, calculate the expected frequencies corresponding to each observed frequency. To do this, enter =SUM(column range)*SUM(row range)/SUM(range of all cells).

10. Use the Insert/Function menu option run a CHITEST analysis of the actual range and expected range.

11. Email me (steven.long@marquette.edu) your completed Excel file as an attachment.