

**The data should be collected by Wednesday, October 30,
The final version of part 1 of your project will be due on Wednesday, November 19,**
You may work in groups of at most 4 people.

Overview: You will need to collect, organize, summarize and present two pairs of comparable representative samples. Each group member should ask 5 faculty and 20 students how far they live from campus.

Format: The report should be typed with 14 point bold headings. The report should include these headings in this order. It should be turned in stapled in the upper left hand corner (a folder is not required or desired.)

- 1. Sampling method/ collection of data**
- 2. Data summary**
- 3. Graphs, charts and tables**
- 4. Discussion and conclusions**
- 5. Confidence intervals**
- 6. Hypothesis**
- 7. Appendix**

1. Describe how each of you **collected** your data to avoided bias. Each member should report.
2. **The Data Summary** includes the sample size n, Mean, median, mode, standard deviation, range, minimum, maximum and quartiles. Just use StatCrunch Summary Stats. Use all data from the whole class for the faculty data. Use all data from your group for the Student data.
3. **The Graphs Charts and Tables** section will include statistical graphs of your data. Be sure to include frequency distributions, cumulative frequency distributions, histograms, qqplots and side by side box plots of your data. Your histograms should use the same classes as your frequency distributions. Be sure to start bins at the same values. Copy and paste these graphs and charts into your report.
4. **The Discussion** describes the shape of your mean data and any outliers. Write a sentence describing each graph.
5. **Make two confidence intervals.** One for Students and one for Faculty.
6. **Write a hypothesis** about the difference between mean distance to school for students and faculty.
7. **Appendix** should have a hand written copy of the data collected by each group member. Grading will be based on how well you answer every part of the questions in complete sentences that demonstrate an exemplary understanding of the concepts with graphs and tables correct, neat and clearly labeled.