

## **MATH 1240 Project #1**

### **Due Thursday, February 8**

The purpose of this project is to collect and present data on a representative sample of at least 30 Otterbein students. Ask each of your experimental units (i.e. sampled students) for their gender, class rank (freshman, sophomore, etc.), GPA, and one other quantitative variable of your choosing. Don't forget to ask their permission for these data first! Your team (of at most three people) must devise a sampling plan, carry out the plan, and summarize your data using Minitab. Your report must be typed, professionally organized, and include the following.

(a) What, specifically, was your sampling plan? Talk about the pros and cons of your plan. Did you find it difficult to carry out? Did you meet any resistance from students? Do you feel like you got a representative sample of Otterbein students?

(b) Using whatever graphs/tables you see fit, summarize your data. You should have at least one graph for each of the four variables measured. For both of the quantitative variables, have Minitab compute the mean, median, standard deviation, and five-number summary, and be sure to talk about the shape of the data and any unusual observations.

(c) What is the average GPA of your sample? Do you think this number accurately estimates the average GPA of *all* Otterbein students? Why or why not?