

## Week 2 Post-Lab

### BIOE 320 Systems Physiology Laboratory

A student collected data to determine any potential differences in the mean integrated EMG signal of dominant and non-dominant forearms. The student asked 12 subjects to collect EMG data on both of their forearms, and noted the mean integrated EMG signal of both. From this data, which may be accessed [here](#), conduct the necessary statistical test to determine if there is a difference.

1. State the appropriate statistical test to be performed.
2. State an appropriate  $\alpha$  value, i.e. the acceptable Type I error rate, you would like to use.
3. Calculate the test statistic based on the data and the statistical test you have chosen. Show all work.
4. Based on your calculated test statistic and selected  $\alpha$  value, make a statistical conclusion.