Biology 3A
Graphing instructions

To graph the height data, use the following directions below. The same can be applied if you are constructing a line graph or an XY scatter platter.

You will need to have the mean heights for both males and females along with the respective standard errors (SE).

Click on the Chart wizard

- Step 1 – Chart type
  - Select column chart and click "next"
- Step 2 – Chart source data
  - Data Range: Select data
  - Click on the Series tab
    - Name box: type Females
    - Click the add button
    - Place the curser in the values box and then select the value(s) to add
    - Name Box – type Males
    - Category (X) axis labels: type the X axis label: Females Males
    - Click "next"
- Step 3 – Chart Options
  - Titles tab – label the X and Y axes labels
    - Do not forget the respective units!!!
    - Gridlines tab – Uncheck all gridlines (there should be not gridlines on the figure)
  - Legend Tab – unselect Legend (unless a legend is required or needed)
    - Click "next"
- Step 4 – Chart location → click "Finished"

- Formatting your figure before submitting it for a grade
  - Double click on a corner of the outer margin
    - Pattern tab – Border → "none"
    - Click OK
  - Double click on the gray area of the figure
    - Border → select "none"
    - Area → select "none", click OK
  - If you have a Legend: Double click
    - Border: None

- Adding Error Bars
  - Double click on the Females bar
    - Click on the Y Error Bar tab
    - Select or enter your SE in the custom boxes (both + and -). Click OK
  - Do the same for the Males bar

- Formatting the Y-axis scale
  - Double click on the Y-axis values
  - Click the Scale Tab
    - Change the scale as needed & click OK

- Figure caption
  - Copy and paste your figure into a Word document and type a concise and descriptive caption.
  - You should be able to have 2-4 figures with captions one 8.5" x 11" sheet of paper. Do not just have one large figure per page!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
  - You should include your p-value in your caption.
  - Example: Figure 1. Biology 3A laboratory males are taller than females ($p = 8.3 \times 10^{-8}$, one-tailed Student t-test).

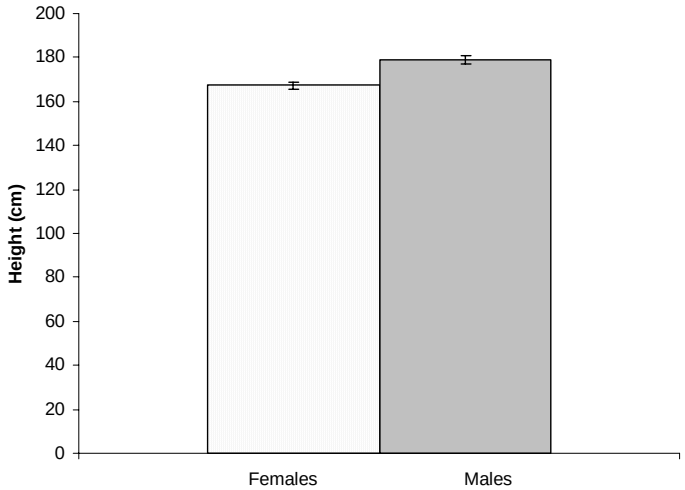

Figure 1. Biology 3A laboratory males are taller than females ($p = 8.3 \times 10^{-8}$, one-tailed Student t-test).