To draw error bars in Excel (specifically for Week 3 Stats Lab):

1. Create your histogram (insert column from a table that has mean values for male and female)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | mean | std | n | stderr |
| Females | 164.0716 | 8.646358 | 19 | 1.983611 |
| Males | 178.7523 | 8.350824 | 26 | 1.637731 |

1. Calculate on your spread sheet the statistic you will use for the error bars (either stdev or standard error). For stdev, you can use an excel function, calculate standard error - stderr = standard deviation divided by the square root of the sample size(n).
2. click on the chart to activate “Chart Tools”; click “Layout”. Make sure the window is wide enough so you see the entire menu bar! add legends for vertical axis and
3. Click Error Bars (far on right). Click “more error bars options” – this is a special case.
4. Click ‘custom’, then specify values.
5. The custom error bars menu will pop up. Enter TWO error values (one for Females and one for Males – in the order the bar graph appears on the chart) –
   1. Enter the first (females), type a comma, then hold down control as you enter the second.
   2. Enter both positive error values and negative error values. (This is because you took the absolute value of the difference of the means – and as you saw on your histogram of the 1000 randomized heights, you have only the ‘right’ (positive) side of the distribution.