Figure Formatting Reference

Graphs that you submit as part of your lab work should be able to stand on their own – without having to be explained by the supporting text. The following is a checklist that can be used to ensure that your plots are well formatted and suitable for submission.
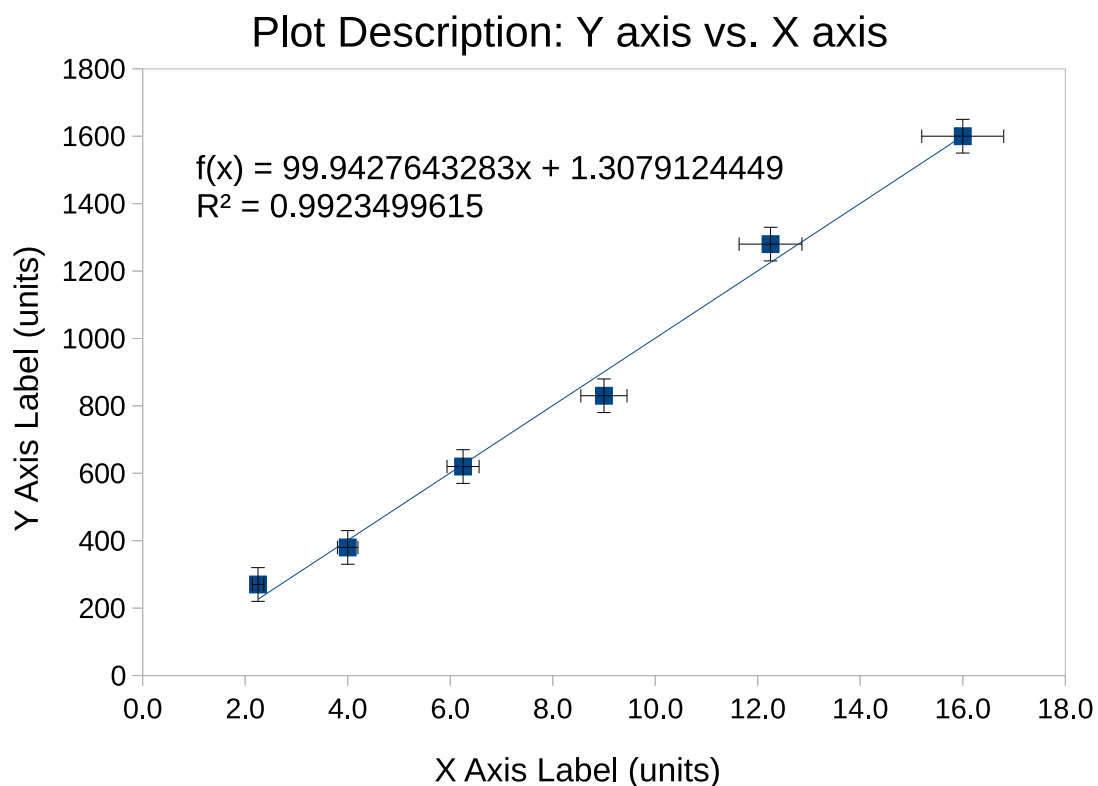
Plot Description: Y axis vs. X axis

$f(x) = 99.9427643283x + 1.3079124449$
$R^2 = 0.9923499615$

Y Axis Label (units)

X Axis Label (units)

Figure 0.1: An example of a well-formatted figure.

FIGURE CHECKLIST

☐ **Clear Title:** Describes the purpose of the plot and what is being plotted.

☐ **Axis Titles with Unit Labels:** Describe what is being plotted on each axis and the units in which they are measured.

☐ **Axis Scale Labels:** Axis scales should be in round, logical, increments and adequately show the range in interest. A scale that runs from 0 to 20 with labels ever 5 units, for example is much better than a scale that runs from 0.5 to 19.7 with labels every 0.4.

☐ **Error Bars on Data Points:** Include error bars, in both the x and y axes, whenever available.

☐ **Fit Lines:** When the data are used for a fit, the fit line should be included on the plot. Additionally, the functional form of the line and the quality of the fit (R^2, for example) should also be printed.

☐ **Fonts:** Should be large and easy to read. The smallest font used should be 12 pt.

☐ **Colors:** Use color only when absolutely necessary. Colored backgrounds, for example are often distracting.

☐ **Legends:** Should only be used when multiple sets of data are plotted. Often the legend can be moved inside the plot area for a more efficient use of plot space.

☐ **Grid Lines:** Should typically *not* be used.