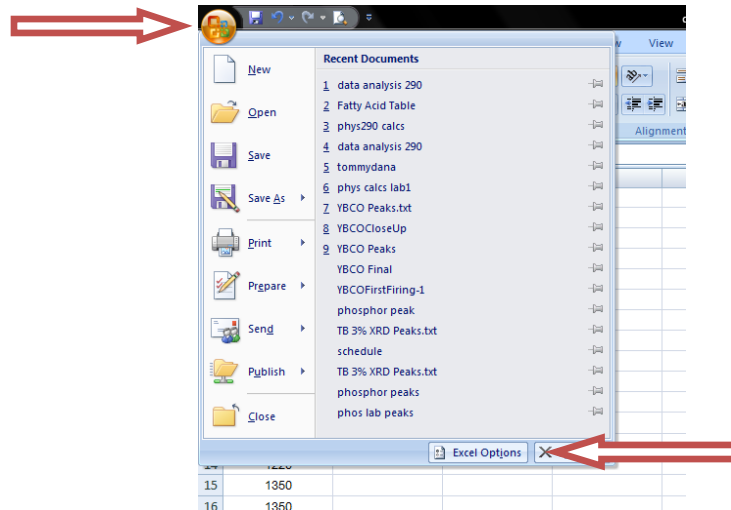
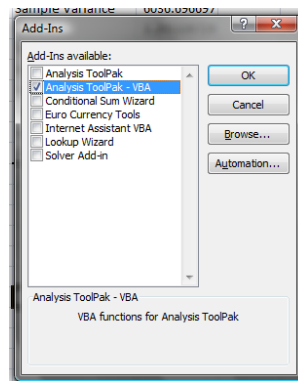


How to create a Histogram for Excel 2007

1. Open an Excel Spreadsheet
2. Under the main Tool Bar, click on “Excel Options”



3. On the left-hand side, click on “Add-ins”
4. At the bottom of the tool bar, selection “Excel Add-ins” from the drop down menu under “Manage.” Click Go.
5. Choose Analysis ToolPak- VBA



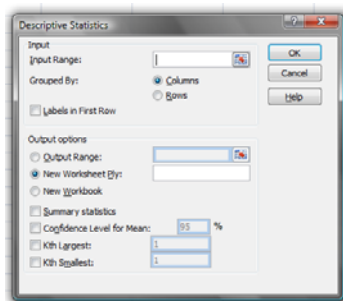
6. If necessary, click “Install Now” when asked.
7. You are now ready for your Data Analysis

8. Copy your data into a worksheet in Excel under one column:

9. Under the “Data” Tab, click on “Data Analysis” on the right-hand side.

10. Click “Descriptive Statistics”

11. Under “Input Range” select the data you entered. Chose a cell for the data to be presented in (under “Output Range”) and check the “Summary Statistics” box. Press ok.



12. The statistics that show up should look similar to:

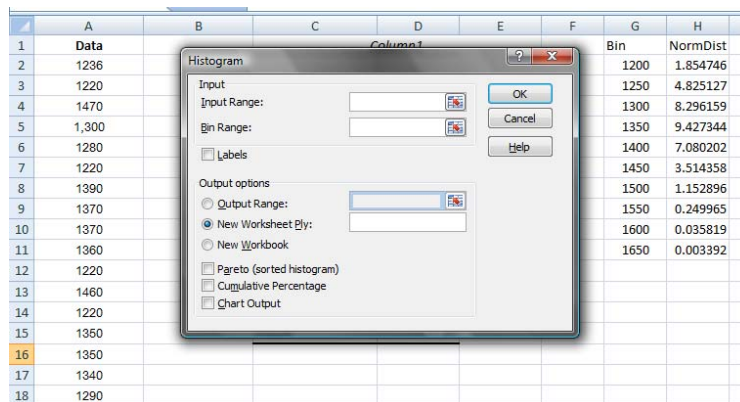
| | A | B | C | D | E |
|----|-------|---|--------------------|-------------|---|
| 1 | Data | | Column1 | | |
| 2 | 1236 | | | | |
| 3 | 1220 | | Mean | 1340.432432 | |
| 4 | 1470 | | Standard Error | 12.77317364 | |
| 5 | 1,300 | | Median | 1340 | |
| 6 | 1280 | | Mode | 1220 | |
| 7 | 1220 | | Standard Deviation | 77.696182 | |
| 8 | 1390 | | Sample Variance | 6036.696697 | |
| 9 | 1370 | | Kurtosis | 2.295109729 | |
| 10 | 1370 | | Skewness | 0.873301292 | |
| 11 | 1360 | | Range | 380 | |
| 12 | 1220 | | Minimum | 1220 | |
| 13 | 1460 | | Maximum | 1600 | |
| 14 | 1220 | | Sum | 49596 | |
| 15 | 1360 | | Count | 37 | |
| 16 | 1360 | | | | |
| 17 | 1340 | | | | |
| 18 | 1290 | | | | |

13. Select a range for your data. In this example, the range is 50, starting at 1200 and ending at 1650. Type these values into a column, titled “Bin.”

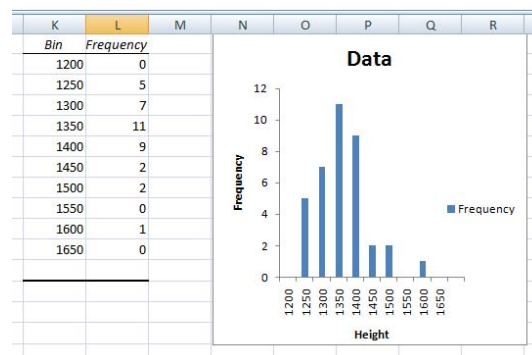
14. To the left, title a column “Norm Dist.” For each value of your bin number, type in the following equation: $=\text{range}*\text{sample size}*\text{normdist}(\text{bin number}, \text{mean}, \text{stdev}, \text{false})$. For this example, the range was 50, and the sample size was 37. It will look like this:

| Font | | Alignment | |
|---|------|-----------|---|
| fx =37*50*NORMDIST(K2, \$D\$3, \$D\$7, FALSE) | | | |
| J | K | L | M |
| | Bin | NormDist | |
| | 1200 | 1.854746 | |
| | 1250 | 4.825127 | |
| | 1300 | 8.296159 | |
| | 1350 | 9.427344 | |
| | 1400 | 7.080202 | |
| | 1450 | 3.514358 | |
| | 1500 | 1.152896 | |
| | 1550 | 0.249965 | |
| | 1600 | 0.035819 | |
| | 1650 | 0.003392 | |

15. Go back to “Data Analysis” under the “Data” tab. Click on “Histogram”
16. Chose your data to go into “Input Range” and your bin data to go into “Bin Range.” For “Output Range,” click a cell where you would like to have your data presented. Check the “Chart Output” box and click ok.

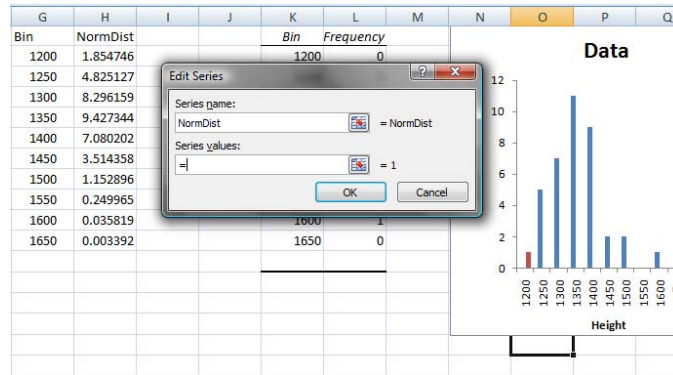


17. The following is what your data should look similar to:

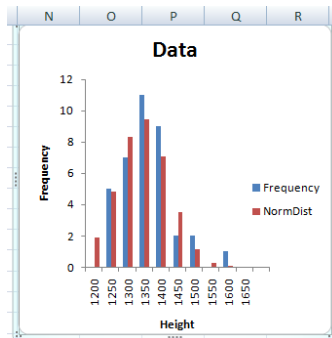


18. Click on the histogram. Under the “Chart Tools” tab, choose the “Design” subtab. To the left (fourth selection in) select “Select Data.”

19. Choose “Add.” Under “Series Name” title it something similar to Norm Dist. Select the appropriate data:



20. Your data will now resemble:



21. To change the NormDist data to a line graph click on the ledge “NormDist” on the histogram. Under “Chart Tools,” and “Design,” choose the far left; “Change Chart Type.” Choose a line graph of your choice to get the final product:

