```
In [5]: %matplotlib inline
        import numpy as np
        import matplotlib.pyplot as plt
        import matplotlib
        matplotlib.rc('xtick', labelsize=12)
        matplotlib.rc('ytick', labelsize=12)

        #generate random number following a normal
        # density with location of 1.0 and scale of 3.0
        x = np.random.normal(1.,3.,size=1000)

        #analyze the random samples with a histogram
        xgrid = np.arange(-10,12,0.5)
        xcenter = (xgrid[1:]+xgrid[0:len(xgrid)-1])/2.
        hx,xedge = np.histogram(x,xgrid)

        #draw the histogram
        fig = plt.figure(figsize=[10,5])
        ax = fig.add_subplot(111)
        ax.plot(xcenter,hx,'ko-')
        fig.show()
        fig.savefig('normrand_hist.png',bbox_inches='tight')

        print np.mean(x), np.var(x)

0.910729355035 9.00587147615
```