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In [7]: %matplotlib inline
import numpy as np
import matplotlib.pyplot as plt
import matplotlib

matplotlib.rc('xtick', labels=12)
matplotlib.rc('ytick', labels=12)

#generate random number from binomial density
# with test number of 10 and probability of event of 0.4
x = np.random.binomial(10,0.4,size=1000)

#analyze the random samples with a histogram
xgrid = np.arange(0.5,20.5,1)
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('binomrand_hist.png',bbox_inches='tight')

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

```

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