**Ch. 11 Inferential Statistics**

**11.1 Descriptive Statistics**

 1) I can identify the shapes of distributions in order to select more appropriate statistics.

 2) I can use measures of position to compare two sets of data.

**11.2 Probability Distributions**

 1) I can construct a probability distribution and calculate its summary statistics.

 2) I can construct and use a binomial distribution and calculate its summary statistics.

**11.3 The Normal Distribution**

 1) I can use the Empirical Rule to approximate data within a normal distribution.

 2) I can find area under normal distribution curves.

 3) I can find probabilities for normal distributions and find data values given probabilities.

**11.4 The Central Limit Theorem**

 1) I can use the Central Limit Theorem to find probabilities.

 2) I can find the area between two sample means.

 3) I can find normal approximations of binomial distributions.

**11.5 Confidence Intervals**

 1) I can find the maximum estimate error for a population mean.

 2) I can use normal distributions to find confidence intervals for the mean.

 3) I can use t-distributions to find confidence intervals for the means.

 4) I can determine a minimum sample size needed for the given data.

**11.6 Hypothesis Testing**

 1) I can write null and alternative hypotheses and identify which represents the claim.

 2) I can perform hypothesis testing using test statistics and p-values.

 3) I can determine whether to reject or fail to reject the null hypothesis.

**11.7 Correlation and Linear Regression**

 1) I can measure the linear correlations for sets of bivariate data using the correlation coefficient.

 2) I can determine the strength of the correlation of data.

 3) I can generate least-squares regression lines for sets of bivariate data and use the lines to make predictions.