

- PS 1 Use dot plots, stem plots, histograms, and cumulative frequency plots to illustrate and then write descriptions and characteristics of center and spread of distributions.
- PS 2 Compute and compare measures of center of distributions (mean, median, etc.).
- PS 3 Compute and compare measures of spread of distributions (range, IQR, standard deviation, etc.).
- PS 4 Compute and compare measures of position: quartiles, percentiles, z-scores, etc.
- PS 5 Create and describe data with box plots and in writing.
- PS 6 Explain the effect of changing units on summary data.
- PS 7 Analyze associations in scatter plots.
- PS 8 Compute and analyze measures of linearity and correlation of bivariate data.
- PS 9 Compute least square regression lines of bivariate data.
- PS 10 Create and interpret residual plots, identify outliers, and influential points.
- PS 11 Apply logarithmic and power transformations to non-linear bivariate data to achieve linearity and interpret results.
- PS 12 Analyze categorical data.
- PS 13 Analyze methods of data collection.
- PS 14 Plan and conduct surveys.
- PS 15 Plan and conduct experiments.
- PS 16 Know and apply the addition rule, multiplication rule, conditional probability and independence to compute probabilities.
- PS 17 Use both binomial and geometric probability distributions to solve problems involving discrete random variables.
- PS 18 Use simulations to model random behavior and probability distributions.
- PS 19 Compute the mean (expected value) and standard deviation of random variables and use statistical methods to complete the linear transformations of random variables.
- PS 20 Identify properties of normal distributions.
- PS 21 Compute standard normal scores (z-score) and use tables of normal distributions to find probabilities.
- PS 22 Use the normal distribution as a model for standard comparison of continuous random variables with different units.
- PS 23 Describe the implications of the Central Limit theorem in context.

- PS 24 Estimate population parameters and margins of error.
- PS 25 Interpret the meaning of confidence intervals and describe properties of confidence intervals.
- PS 26 Conduct and interpret large sample confidence intervals for proportions and difference of proportions.
- PS 27 Conduct and interpret confidence intervals for a mean and difference between two means (paired and unpaired).
- PS 28 Conduct and interpret confidence intervals for the slope of the least squares regression line.
- PS 29 Conduct and interpret a large sample test for a proportion.
- PS 30 Conduct and interpret a large sample test for the difference of two proportions.
- PS 31 Conduct and interpret a test for mean.
- PS 32 Conduct and interpret a test for the difference of two means.
- PS 33 Conduct and interpret a T-test for the slope of the least squares regression line.
- PS 34 Become fluent in further statistical topics and/or demonstrate college math readiness.
- PS 35 Conduct and interpret a Chi-Squared Goodness of Fit test.
- PS 36 Conduct and interpret a Chi-Squared Homogeneity test.
- PS 37 Identify and interpret Type I and Type II errors and describe what influences the power of a test.