## MATH 1530 Course Competencies-Students will be able to:

1. Solve general, real-world probability problems.
2. Classify data as qualitative, quantitative discrete, or quantitative continuous.
3. Identify sampling methods and obtain a sample using various appropriate methods.
4. Organize and graphically display data in various forms.
5. Determine the primary descriptive characteristics for a set of data, using technology, and interpret the results in context.
6. Solve practical problems involving discrete and continuous random variables.
7. Solve real-world problems involving the normal distribution.
8. Construct sampling distributions for a population mean and solve related problems.
9. Determine, using appropriate technology, and interpret confidence intervals for population means and proportions.
10. Determine sample size necessary for estimating population means and proportions.
11. Use technology to conduct one-sample hypothesis tests regarding claims about population proportions and means.
12. Use technology to conduct appropriate two-sample hypothesis tests regarding claims about population proportions and means.
13. Form valid conclusions based on results from hypothesis tests.
14. Discern whether a linear correlation exists between two variables and, if so, determine the linear regression equation and use it to make predictions for a given value of the independent variable.
