## 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.