



MATH 1213 Introduction to Statistics
2019 – 2020
4 Credit Hours

Description:	Meets MnTC Goal Areas 2 and 4. Topics include data summary, frequency distributions, plots, graphs, measures of central tendency, variation, probabilities, probability distributions and confidence intervals. Hypothesis testing of means, proportions and variances will be conducted using the z-test, t-test, chisquare-test, f-test and ANOVA. Optional topics may include nonparametric statistics, sampling and simulation
Prerequisites:	MATH1122
Corequisites:	None
Competencies:	<ol style="list-style-type: none">1. Demonstrate knowledge of statistical terms and concepts2. Organize and represent data using frequency distributions3. Organize and represent data using graphs4. Summarize data using measures of central tendency5. Summarize data using measures of variation and position6. Find probability of an event using probability properties7. Find probability of an event using counting techniques8. Analyze the characteristics of discrete probability distributions including binomial9. Analyze the characteristics of a normal distribution, including the central limit theorem10. Identify the confidence interval for mean, proportion, variance, and standard deviation.11. Demonstrate the process of hypothesis testing for specific values of mean, proportion, variance, and standard deviation.12. Test the difference between two means, two variances, and two proportions13. Perform a linear correlation and regression analysis14. Perform chi-square test for goodness of fit, independence and homogeneity of proportions15. Perform a one way analysis of variance
MnTC goal areas:	2. Critical Thinking 4. Mathematics/Logical Reasoning