**Course Description:** Collection, analysis, presentation and interpretation of data, and probability. Analysis includes descriptive statistics, correlation and regression, confidence intervals and hypothesis testing. Credit not allowed for both Math 1342 and Math 2342. (Fulfills statistics requirement for admission to upper division nursing courses.)

The following topics from the text are to be taught:

**Chapter 2**
- 2.2 Frequency Distributions
- 2.3 Histograms
- 2.4 Statistical Graphs

**Chapter 3**
- 3.2 Measures of Center
- 3.3 Measures of Variation
- 3.4 Measures of Relative Standing and Boxplots

**Chapter 4**
- 4.2 Basic Concepts of Probability
- 4.3 Addition Rule
- 4.4 Multiplication Rule: Basics
- 4.5 Multiplication Rule: Complements and Conditional Probability
- 4.6 Counting

**Chapter 5**
- 5.2 Random Variables
- 5.3 Binomial Probability Distributions
- 5.4 Mean, Variance, and Standard Deviation for the Binomial Distribution

**Chapter 6**
- 6.2 The Standard Normal Distribution
- 6.3 Applications of Normal Distributions
- 6.4 Sampling Distributions and Estimators
- 6.5 The Central Limit Theorem
- 6.7 Normal as Approximation to Binomial

**Chapter 7**
- 7.2 Estimating a Population Proportion
- 7.3 Estimating a Population Mean
- 7.4 Estimating a Population Variance

**Chapter 8**
8.2 Basics of Hypothesis Testing
8.3 Testing a Claim about a Proportion
8.4 Testing a Claim about a Mean
8.5 Testing a Claim about Variation

Chapter 10
10.2 Correlation
10.3 Regression

Learning Outcomes:

Upon successful completion of this course, students will:

1. Explain the use of data collection and statistics as tools to reach reasonable conclusions.
2. Recognize, examine and interpret the basic principles of describing and presenting data.
3. Compute and interpret empirical and theoretical probabilities using the rules of probabilities and combinatorics.
4. Explain the role of probability in statistics.
5. Examine, analyze and compare various sampling distributions for both discrete and continuous random variables.
6. Describe and compute confidence intervals.
7. Solve linear regression and correlation problems.
8. Perform hypothesis testing using statistical methods.