Topics for Elementary Statistics
MATH 2200
Georgia Highlands College
Updated August 2010

TOPICS

- Probability Theory
- Correlation
- Discrete Probability Distributions
- Central Limit Theorem
- Chi-square
- Descriptive Statistics
- Regression
- Continuous Probability Distribution (Normal Distribution)
- Hypothesis Testing
- ANOVA

This course does **not** require a knowledge of Calculus.

TEXTBOOK

MATH 2200 ELEMENTARY STATISTICS
Suggested Assignments from *Beginning Statistics* by Warren, Denley, & Atchley

SUGGESTED COURSE CONTENT

Chapter 1
1.1 Getting Started
1.2 Data Classification
1.3 The Process of a Statistical Study
1.4 The Reality of Conducting a Study
Chapter 1 Review
Chapter 2
2.1 Frequency Distributions
2.2a Graphical Displays of Data: Pie Charts and Bar Graphs
2.2b Graphical Displays of Data: Histograms, Polygons, Stem and Leaf Plots
2.3 Analyzing Graphs
Chapter 2 Review
Chapter 3
3.1 Measures of Center
3.2 Measures of Dispersion
3.3 Measures of Relative Position
Chapter 3 Review
Chapter 4
4.1 Classical Probability
4.2 Probability Rules
4.3 Basic Counting Rules
4.4 Additional Counting Techniques
Review Chapter 4

Chapter 5
5.1 Expected Value
5.2 Binomial Distribution
5.3 Poisson Distribution
5.4 Hypergeometric Dist
Chapter 6
6.1Introduction to the Normal Curve
6.2 Reading a Normal Curve Table
6.3 Finding Probabilities Using the Normal Curve
6.4 Finding z-Values using the Normal Curve
6.5 Finding t-Values
Chapter 6 Review
Chapter 7
7.1 Central Limit Theorem
7.2 Central Limit Theorem with Population Means
7.3 Central Limit Theorem with Population Proportions
7.4 Approximating Binomial Using Normal Distribution
Chapter 7 Review
Chapter 10***
10.1 Fundamentals of Hypothesis Testing
10.2 Hypothesis Testing for Means (Small Samples)
10.3 Hypothesis Testing for Means (Large Samples)
10.4 Hypothesis Testing for Population Proportions
10.5 Types of Errors
10.6 Hypothesis Testing about a Population Variance
11.6 ANOVA
Review Chapters 10-11
Chapter 12
12.1 Scatter Plots and Correlation
12.2 Linear Regression
12.3 Regression Analysis

*** Chapter 8 on confidence intervals is optional in our current curriculum. However, it is covered in the online version of the course since some of Chapter 8 is needed for section 12.3. Chapter 8 material, outlined below, may be included after Chapter 7 and before Chapter 10.

If an instructor decides not to cover Chapter 8, then more time may be allotted for Chapters 7 through 12.

Chapter 8
8.1 Introduction to Estimating Population Means
8.2 Estimating Population Means (Large Samples)