

## **Departmental Syllabus**

### **Math 1830 -- Elementary Statistics**

**Textbook:** The Basic Practice of Statistics (4<sup>th</sup> Edition), by David Moore

**Prerequisites:** MATH 15 or MATH 1530, or mathematics proficiency level of 15 or above.

**Calculators:** Scientific calculator required. (NOTE: On occasion, individual instructors may restrict the use of any type of calculator).

**Software:** Minitab will be used throughout the course.

**Course Description:** An introduction to statistical analytical methods including graphing distributions, numerical summaries, linear regression and correlation, the normal distribution, confidence intervals and hypothesis tests for means and proportions, analyzing two-way tables, and analysis of variance.

#### **Chapters and Topics to be covered:**

1. Picturing Distributions with Graphs
2. Describing Distributions with Numbers
3. The Normal Distributions
4. Scatterplots and Correlation
5. Regression
6. Two-Way Tables
7. Exploring Data: Part I Review
  
8. Producing Data: Sampling
9. Producing Data: Experiments
10. Introducing Probability
11. Sampling Distributions
14. Confidence Intervals: The Basics
15. Tests of Significance: The Basics
16. Inference in Practice
17. From Exploration to Inference: Part II Review
  
18. Inference about a Population Mean
19. Two-Sample Problems
20. Inference about a Population Proportion
21. Comparing Two Proportions
22. Inference about Variables Part III Review
  
23. Two Categorical Variables: The Chi-Square Test
25. One-Way Analysis of Variance: Comparing Several Means