

AP Statistics Full Year Course

Text and Calculator: A calculator capable of doing statistical tests is required. The TI-83 family is the most popular and is highly recommended.

The required text is: *The Practice of Statistics, TI-83/89 Graphing Calculator Enhanced*
-- Dan Yates, David S. Moore, Daren S. Starnes
Second Edition, 2003, W.H. Freeman and Company, ISBN 0-7167-4773-167

Course Outline

Semester 1

PART I. ORGANIZING DATA: LOOKING FOR PATTERNS AND DEPARTURES FROM PATTERNS

1. Exploring Data
 - 1.1 Displaying Distributions with Graphs
 - 1.2 Describing Distributions with Numbers

2. The Normal Distributions
 - 2.1 Density Curves and the Normal Distribution
 - 2.2 Standard Normal Calculations

3. Examining Relationships
 - 3.1 Scatterplots
 - 3.2 Correlation
 - 3.3 Least-Squares Regression

4. More on Two-Variable Data
 - 4.1 Transforming Relationships
 - 4.2 Cautions about Correlation and Regression
 - 4.3 Relations in Categorical Data

PART II. PRODUCING DATA: SAMPLES, EXPERIMENTS, AND SIMULATIONS

5. Producing Data
 - 5.1 Designing Samples
 - 5.2 Designing Experiments
 - 5.3 Simulating Experiments

PART III PROBABILITY: FOUNDATIONS OF INFERENCE

6. Probability: The Study of Randomness
 - 6.1 The Idea of Probability
 - 6.2 Probability Models

6.3 General Probability Rules

7. Random Variables

7.1 Discrete and Continuous Random Variables

7.2 Means and Variances of Random Variables

Semester 2

8. The Binomial and Geometric Distributions

8.1 The Binomial Distributions

8.2 The Geometric Distributions

9. Sampling Distributions

9.1 Sampling Distributions

9.2 Sample Proportions

9.3 Sample Means

PART IV. INFERENCE: CONCLUSIONS WITH CONFIDENCE

10. Introduction to Inference

10.1 Estimating with Confidence

10.2 Tests of Significance

10.3 Making Sense of Statistical Significance

10.4 Inference as Decision

11. Inference for Distributions

11.1 Inference for the Mean of a Population

11.2 Comparing Two Means

12. Inference for Proportions

12.1 Inference for a Population Proportion

12.2 Comparing Two Proportions

13. Inference for Tables: Chi-Square Procedures

13.1 Test for Goodness of Fit

13.2 Inference for Two-Way Tables

14. Inference for Regression

14.1 Inference about the Model