AP Statistics Scope and Sequence

AP Statistics College Board Standards

Course Description:
This is an Advanced Placement course designed to meet the requirements of statistics as outlined in the Course Description of the Advanced Placement Program in Mathematics. The purpose of the AP course in statistics is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad conceptual themes: exploring data, planning a study, anticipating patterns, and statistical inference. Students will use technology to build understanding and make connections. It is highly recommended that students have access to a graphing tool, either a calculator or an online option, to work with on a daily basis. At the conclusion of this course, students may take the Advanced Placement Calculus Exam which provides students the opportunity to earn college credit. This course satisfies the 3rd or 4th year Mathematics credit.

Scope and Sequence 2024-2025

Semester One
First 9 Weeks (40 Days)
Unit 1 : Chapter 1: Data Analysis (13 Days) 1.1 Analyzing Categorical Data 1.2a Displaying Quantitative Data 1.2b Displaying Quantitative Data: Stemplots 1.2c Displaying Quantitative Data: Histograms 1.3a Describing Quantitative Data with Numbers 1.3b Describing Quantitative Data with Numbers: Boxplots 1.3c Describing Quantitative Data: Standard Deviation Review and Chapter 1 Test **Unit 2 Modeling Distributions of Quantitative Data (11 Days)** 2.1 Describing Location in a Distribution 2.2a Density Curves and Normal Distributions 2.2b Normal Distributions and Table A Review and Chapter 2 Test

Unit 3 Exploring Two-Variable Quantitative Data (11 Days)

3.1 Scatterplots and Correlation

3.2 Least Squares Regression

Review and Chapter 3 Test

Unit 4 Contextual Applications of Differentiation (10 Days)

4.1 Sampling and Surveys

Second 9 Weeks (42 Days)

Unit 4 Contextual Applications of Differentiation (Continued 10 Days)

4.1 Sampling and Surveys

4.2 Experiments

4.3 Using Studies Wisely

Review and Chapter 4 Test

Unit 5: Probability (13 Days)

5.1 Randomness, Probability, & Simulation

5.2 Probability Rules

5.3 Conditional Probability & Independence

Review and Chapter 5 Test

Unit 6: **Random Variables & Probability Distributions (10 Days)**

6.1 Discrete & Continuous Random Variables

6.2 Transforming & Combining Random Variables

6.3 Binomial & Geometric Random Variables

Review and Chapter 6 Test

Unit 7 Sampling Distributions (10 Days)

7.1 What is a Sampling Distribution?

7.2a Sample Proportions

7.2b Difference in Sample Proportions

7.3a Sample Means

7.3b Difference in Sample Means

Review and Chapter 7 Test

Fall Final Exams

Semester Two

January 8-May 21, 2025

Third 9 Weeks (40 Days)

Chapter 8: Estimating Proportions with Confidence (11 Days)
8.1 Confidence Intervals
8.2 Estimating a Population Proportion
8.3 Estimating a Difference in Proportions
Review and Chapter 8 Test

Chapter 9: Testing Claims about Proportions (11 Days)
9.1 Significance Tests: The Basics
9.2 Tests about a Population Proportion
9.3 Tests about a Difference in Proportions
Review and Chapter 9 Test

Chapter 10: Estimating Means with Confidence (10 Days)
10.1 Estimating a Population Mean
10.2 Estimating a Difference in Means
Review and Chapter 10 Test

Chapter 11: Testing Claims about Means (8 Days)
11.1 Tests about a Population Mean
11.2 Tests about a Difference in Means
Review and Chapter 11 Test

Fourth 9 Weeks (46 Days)

Chapter 12: Inference for Distributions & Relationships (14 Days)
12.1 Chi-Square Tests for Goodness of Fit
12.2a Chi-Square Tests for Homogeneity
12.2b Chi-Square Tests for Independence
12.3a Inference for Slope (t-Interval for Slope)
12.3b Inference for Slope (t-Test for Slope)
Review and Chapter 12 Test

AP Review (22 Days)

AP Exam :

AP Spring Final Exam Review (3- 5 Days)