

AP STATISTICS

AP Statistics is an introductory college-level statistics course that introduces students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students cultivate their understanding of statistics using technology, investigations, problem solving, and writing as they explore concepts like variation and distribution; patterns and uncertainty; and data-based predictions, decisions, and conclusions.

TOPICS OF STUDY

- You'll be introduced to how statisticians approach variation and practice representing data, describing distributions of data, and drawing conclusions based on a theoretical distribution.
- You'll build on this by representing two-variable data, comparing distributions, describing relationships between variables, and using models to make predictions.
- You'll be introduced to study design, including the importance of randomization. You'll understand how to interpret the results of well-designed studies to draw appropriate conclusions and generalizations.
- You'll learn the fundamentals of probability and be introduced to the probability distributions that are the basis for statistical inference.
- As you build understanding of sampling distributions, you'll lay the foundation for estimating characteristics of a population and quantifying confidence.
- You'll learn inference procedures for proportions of a categorical variable, building a foundation of understanding of statistical inference.
- You'll learn to analyze quantitative data to make inferences about population means.
- You'll learn about chi-square tests, which can be used when there are two or more categorical variables.
- You'll understand that the slope of a regression model is not necessarily the true slope but is based on a single sample from a sampling distribution, and you'll learn how to construct confidence intervals and perform significance tests for this slope.

Students who are considering enrolling in AP Statistics have already completed an Advanced Algebra class and have an understanding of basic statistical measures. They are independent learners with strong reading and writing skills. They are also open-minded and willing to work outside of their academic comfort zone. This is not your typical math class!

WORKLOAD & EXPECTATIONS

- Daily Reading + Problems Sets (~45 minutes/night)
- Warm-up Multiple Choice practice problems
- Unannounced Homework Quizzes
- Group Project at the end of each semester
- Complete all work on time
- Communicate clearly and concisely in writing. This course is just as much a writing class as it is a math class.
- Seek help if needed
- Form a study group with your classmates
- Get work in advance of absences and make up work in a timely fashion

THE EXAM

Three Hour Exam:

50 Multiple Choice Questions (90 min)
6 Free Response Questions (90 min)

COURSE SKILLS

- develop skills in critical thinking and analytical writing
- Selecting methods for collecting or analyzing data
- Describing patterns, trends, associations, and relationships in data
- Using probability and simulation to describe probability distributions and define uncertainty in statistical inference
- Using statistical reasoning to draw appropriate conclusions and justify claims

QUESTIONS? SEE MR. BRADLEY

Or visit <https://apcentral.collegeboard.org/courses/ap-statistics/course>