

## **Course Name: AP Statistics**

**Duration:**  1 Semester  Full Year

**Grade Level:**  9th  10th  11th  12th (check all that apply)

### **Are there any prerequisites for the course?**

Algebra 2

### **WHAT this course is about:**

The AP Statistics course introduces students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. There are four themes evident in the content, skills, and assessment in the AP Statistics course: exploring data, sampling and experimentation, probability and simulation, and statistical inference. Students use technology, investigations, problem solving, and writing as they build conceptual understanding.

### **WHY take this course:**

The AP Statistics course is an excellent option for any secondary school student who has successfully completed a second-year course in algebra and who possesses sufficient mathematical maturity and quantitative reasoning ability. Because second-year algebra is the prerequisite course, AP Statistics is usually taken in either the junior or senior year. Decisions about whether to take AP Statistics and when to take it depend on a student's plans:

- Students planning to take a science course in their senior year will benefit greatly from taking AP Statistics in their junior year.
- For students who would otherwise take no mathematics in their senior year, AP Statistics allows them to continue to develop their quantitative skills.
- Students who wish to leave open the option of taking calculus in college should include precalculus in their high school program and perhaps take AP Statistics concurrently with precalculus. - Students with the appropriate mathematical background are encouraged to take both AP Statistics and AP Calculus in high school.

### **WHAT you'll learn:**

Unit 1: Exploring One-Variable Data

Unit 2: Exploring Two-Variable Data

Unit 3: Collecting Data

Unit 4: Probability, Random Variables, and Probability Distributions

Unit 5: Sampling Distributions

Unit 6: Inference for Categorical Data: Proportions

Unit 7: Inference for Quantitative Data: Means

Unit 8: Inference for Categorical Data: Chi-Square

Unit 9: Inference for Quantitative Data: Slopes

### **WHAT you'll do:**

Students will solve math by doing math. Students will collect and analyze data throughout the course of the year. Students will learn first by experiencing math, and then formalizing their learning with their teacher.

### **WHERE this could take you:**

The AP Statistics course is equivalent to a one-semester, introductory, non-calculus-based college course in statistics.

### **OPTIONAL Course Outline (“scope and sequence”, sequence chart, etc.)**

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