STATISTICS FAQ

Why Should I Take It?

Statistics is the most widely applicable branch of mathematics. It is used by more people than any other kind of math. You'll never wonder when you'll ever use this stuff!

Who Uses Statistics?

Everyone who needs to collect and analyze data needs to understand statistics. That's every branch of science, of course. And it's also important in the social sciences (like psychology, sociology, anthropology), in business and economics, in political science and government, in law, and in medicine. There is a very strong chance YOU will use statistics in college and in your career. And it has many practical applications in life (see back of brochure).

Could I Take Statistics In College?

Yes, and you probably will. Statistics is required for many majors, and strongly recommended for others. Many colleges now give students a choice of Statistics or Calculus to fulfill their math requirements.

Then Why Should I Take It In High School?

There are several advantages. Here it's a full year course so you'll have more opportunities to ask questions and really understand the concepts than at college where the class meets only a few times per week for one semester. You will enter college ready to apply your skills in your first semester courses. Many former students have returned after a couple of years in college to say that Statistics was the most important and helpful course they took in high school.

AP Statistics: What the Course Covers…

1. **Experimental Design**
   Students design appropriate experiments in order to draw conclusions that can be generalized to the population of interest. Students will also interpret studies and experiments to determine whether the conclusions from the studies warrant consideration.
2. **Exploring Data**
   Students collect and examine data and display the patterns that emerge. Data from students in class as well as real world data sets are gathered and used to illustrate concepts.
3. **Producing Models Using Probability and Simulation**
   Students learn to anticipate patterns and produce models for prediction. Students use simulations to model situations that are not practical to replicate using other methods.
4. **Statistical Inference**
   Students learn what can be generalized about the population. Students also consider how to investigate research questions, design a study, and interpret the results.

AP STATISTICS or PROBABILITY/STATISTICS

What is AP Statistics?

AP Stat is a college level introductory course in statistics. You'll learn how to collect, organize, analyze, and interpret data. Because it's an AP course, you can earn college credit for this course.

Who Should Take It?

The prerequisite course for AP Statistics is Algebra 2, but traditionally, those with more math have better success. Your commitment to do college-level work is just as important as your math background. Many people take AP Statistics as an elective, in addition to their regular math course.

Expectations in AP Stat -

It's a college course, so the expectations are high. You'll be expected to do homework every day, and not just math problems. There is reading and writing involved. In fact, if you think math is all formulas, equations, and calculations, you'll soon find that this isn't really a math course. It's a course in reading, analyzing, thinking, and writing clearly.

What is Probability/Statistics?

Probability/Statistics is a year-long project-based introduction to statistics course that emphasizes working with data and statistical ideas. It is a technology-based course that will give the student who goes on to college, as well as the student who does not, highly useable and marketable skills.

Who Should Take It?

Anyone who has completed Geometry and Algebra 2 is eligible to take Probability/Statistics. It is designed for students who want a fourth year of math, but for which math may not be their strongest subject.

Expectations in Prob/Stat

This is a computer based course so computational work and graphs are done on computers using statistical software. Assessments are based on projects (when possible) where students will demonstrate proficiency of the learned concepts by producing professional quality statistical analyses.

Probability/Statistics: What the Course Covers…

1. **Producing Data**
   How do we get "good" data? Sampling and surveys. Designing experiments.
2. **Displaying Data**
   Graphs. Numerical summaries. Scatterplots, correlation, and regression.
3. **Chance and Randomization**
   Simulations. Probability.
4. **An Introduction to Inference**
   Confidence intervals. Tests of significance.