

# Should I take CALCULUS or STATISTICS?

## Part 1: Should You take Statistics or Calculus?

**Statistics can be taken at the same time as Pre-Calculus or Calculus.**

### What college major do you plan to pursue?

If you plan to pursue a degree in mathematics, the sciences or engineering, you will be expected to take calculus in college. If you plan to major in English, history, the social sciences, fine arts or foreign languages, then you are more likely to need a statistics course. Business majors will probably need to take both calculus and statistics. You want to choose a course that sets you up well for your college math requirements. See the chart to the right →

### What is the difference between AP Calculus and AP Statistics?

**AP Calculus:** The main topics are Limits, Derivatives, and Integrals. These ideas are applied to the entire family of functions and will be shown in formula, graphical, and tabular forms. Students are required to complete computations by hand and with a calculator. Strong algebra skills are required. Students will be asked to apply the three main topics to real world applications.

**AP Statistics:** The main topics are Exploring Data, Sampling and Experimentation, Anticipating Patterns, and Statistical Inference. Students will collect data, perform statistical analyses on the data, and then make conclusions about the data. Students complete numerous activities and projects.

### Other Information:

- The number one reason students struggle in calculus is poor algebra/trigonometry skills.
- Students who perform at a high level in mathematics typically take calculus.
- Analytical students who want a procedure and an exact answer to all problems prefer calculus.
- Statistics is more of a thinking course where the calculator does the complicated mathematics and the student has to explain the meaning of the statistics in the context of a situation.
- Students who like to make an argument about what is true and describe their level of confidence prefer statistics.
- Calculus requires approximately 30 minutes of **homework** per night while statistics requires approximately 20 minutes of homework per night.
- Calculus has 3 simple assignments for **summer work** with an online key. Statistics does not have summer work.

Major	Stats	Calc.
History	X	
English, Journalism	X	
Foreign Language	X	
Music, Art	X	
Philosophy, Religion	X	
Sociology, Psychology	X	
Political Science	X	
Social Work	X	
Pre-Law	X	
Math	X	*X*
Science, Engineering	X	X
Medicine (Pre-Med, Pre-Vet, Pre-Dentistry, Pre-Pharmacy, Physical Therapy)	X	X
Education (non-math)	X	
Business	X	*X*
Computers Science		X
Information Systems	X	*X*
Economics	X	*X*

\* = Higher Priority

## Part 2: Should you take Advanced Placement (AP) or College Credit Plus (CCP)?

	<b>AP Statistics</b>	<b>CCP Statistics Through Sinclair</b>	<b>AP Calculus</b>	<b>CCP Calculus Through Sinclair</b>
<b>Pre-requisite</b>	Teacher recommendation from Pre-Calculus or Alg 2.	Earn a B in Alg 2/Pre-Cal OR Earn a 22 on the math ACT OR Earn a 430 on the math SAT OR Earn college-ready on the Accuplacer	Teacher recommendation from Pre-Calculus	Earn a B in Pre-Calculus OR Earn a 22 on the math ACT OR Earn a 430 on the math SAT OR Earn college-ready on the Accuplacer
<b>Grading</b>	30% of your grade is based on homework, classwork, and quizzes. 70% of your grade is based on projects and tests.	30% of your grade is based on the standard curriculum (HW, quizzes, projects) 70% of your grade is based on your grade on four Sinclair Exams and the Final Exam	20% of your grade is based on homework, classwork, and quizzes. 80% of your grade is based on projects and tests.	20% of your grade is based on the standard curriculum (HW, quizzes, projects) 80% of your grade is based on your grade on four Sinclair Exams and the Final Exam
<b>College Credit</b>	Earn a 3, 4, 5 on the AP Exam Nationwide, 59% of students who take this exam earn college credit. The exam costs approx. \$90	Earn a 60% or better in the class to earn the credit  This class is worth 4 semester hours.	Earn a 3, 4, 5 on the AP Exam Nationwide, 59% of students who take this exam earn college credit. The exam costs approx. \$90	Earn a 60% or better in the class to earn the credit.  This class is worth 5 semester hours.
<b>Dropping &amp; Failure</b>	You can switch from Statistics to another math class, such as senior math, without penalty. Failure affects your HS GPA. There is no penalty for earning a 1 or 2 on the AP Exam.	You can only drop before the drop date in late September. Failure affects your High School GPA and your college GPA. If you earn less than 60%, you will owe the cost of this class.	You can switch from Calculus to another math class, such as senior math, without penalty. Failure affects your HS GPA.	You can only drop before the drop date in late September. Failure affects your High School GPA and your college GPA. If you earn less than 60%, you will owe the cost of this class.
<b>Calculator</b>	TI-83 or TI-84 – You can use this on everything in this class. This models the AP Test format.	TI-83 or TI-84 – You can use this on everything in this class.	TI-83 or TI-84 – You can use this on half the assignments and tests in this class. This models the AP Test format.	You can use a graphing calculator in class but you must use a scientific calculator (TI-30x iis) on Sinclair Exams.