

Should I take *CALCULUS* or *STATISTICS*?

Part 1: Should You take Statistics or Calculus?

What college major do you plan to pursue?

See the chart to the right →

If you plan to pursue a degree in a STEM field, you will be expected to take multiple calculus courses in college. **You should take Calculus.** If possible, **take Statistics as well.**

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. **You should take Statistics.**

If you are NOT a fan of math, but know you will need a math course in college, then **consider taking Statistics** after algebra 2. *You could be one and done.*

Business majors will probably need to take both calculus and statistics. Take both **Pre-Calculus** and **Statistics** in high school.

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.

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.
- 20% of your grade is based on homework, classwork, projects, and quizzes.
- 80% of your grade is based on projects and tests.

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:

- 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.
- 30% of your grade is based on homework, classwork, projects, and quizzes.
- 70% of your grade is based on projects and tests.

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 (Physical Therapy, Pre-Med, Pre-Vet, Pre-dentistry, Pre-Pharmacy)	X	X
Education (non-math)	X	
Business	X	X
Computer Science		X
Information Systems	X	*X*
Economics	X	*X*

* = Higher Priority

Both Calculus and Statistics require a TI-83 or TI-84 Graphing Calculator.

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

	AP	CCP Through Sinclair
Pre-requisite	Statistics: Teacher recommendation from Pre-Calculus or Alg 2. Calculus: Teacher recommendation from Pre-Calculus	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
College Credit	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.
Dropping & Failure	You can switch from Statistics or Calculus to another math class without penalty. Failure affects your HS GPA. There is no financial penalty for earning a 1/2 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.

Part 3: Planning Your Path

Student Type	Grade 9	Grade 10	Grade 11	Grade 12
Loves math. Plans to major in a STEM field.	CP Geometry	CP Algebra 2 <i>Optional:</i> ○ Applied Life Math	Pre-Calculus <i>Optional:</i> ○ Statistics ○ Intro to Comp. Science ○ Intro to Engineering ○ Applied Life Math	Calculus <i>Optional:</i> ○ Statistics ○ Intro to Comp. Science ○ Intro to Engineering ○ Applied Life Math
Good at math. Will not major in a STEM field	CP Geometry	CP Algebra 2 <i>Optional:</i> ○ Applied Life Math	Statistics <i>Optional:</i> ○ Intro to Comp. Science ○ Intro to Engineering ○ Applied Life Math	<i>Optional:</i> ○ Pre-Calculus ○ Intro to Comp. Science ○ Intro to Engineering ○ Applied Life Math
OK at math Would like to complete the college math requirement at NW through CCP.	CP Algebra 1 B	CP Geometry	CP Algebra 2 <i>Optional:</i> ○ Applied Life Math	Statistics <i>Optional:</i> ○ Pre-Calculus ○ Intro to Comp. Science ○ Intro to Engineering ○ Applied Math

Take the bolded course. Optional courses can be taken along with the bolded course.