



# AP COURSE OFFERINGS IN THE MATH DEPARTMENT

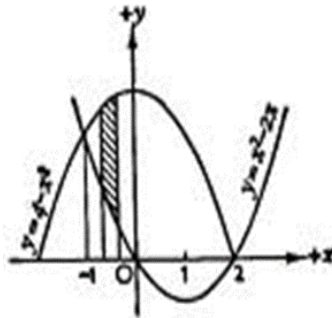


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## AP Calculus

The course emphasizes a multi-representational approach to Calculus, with concepts, results, and problems being expressed geometrically, numerically, analytically, and verbally. The connections among these representations also are important. Broad concepts and widely applicable methods are emphasized. If you would like further information from the College Board, feel free to log on to their website at <http://apcentral.collegeboard.com/> and access the AP portion of the website.



### What are the pre-requisites for AP Calculus?

Students are required to have completed a comprehensive Mathematics course load before signing up for AP Calculus. The required pre-requisite courses are Algebra 1, Geometry, Algebra 2/Trig, and Pre-Calculus.

### How much college credit will I receive for passing the AP test?

Since this is an AP (Advanced Placement) course, you have the opportunity to take the AP Calculus Exam given in May. If you score 3 or higher, you may receive college credit. The AB course is generally the equivalent of one semester of college calculus, and the BC course is equivalent to two semesters.

### What is the difference between Calculus AB and BC?

Calculus BC is an extension of Calculus AB rather than an enhancement; common topics require a similar depth of understanding. Both courses are intended to be challenging and demanding. Calc AB equates to 1 semester of college Calculus. Calc BC equates to 2 semesters of college Calculus.

### Who typically signs up for Calculus AB and BC?

Students taking AP Calculus are typically Juniors or Seniors just completing a Pre-Calculus class. Generally, students who have completed Pre-Calculus at the regular level will sign up for AB Calculus, while students in Honors Pre-Calculus will sign up for either course based on their success in prior Math courses.

## Calculus III

Calculus III is the 3rd course in Calculus and Analytic Geometry. Topics include three-dimensional space, functions of several variables, partial derivatives, and multiple integrals. U of I requires a score of 4 or 5 on the BC Calc exam for entrance into the course. This course uses MakingMath Software and there is a fee associated with this course through University of Illinois. Qualifications on: <http://netmath.math.uiuc.edu/whoqual.html>.

## AP Statistics

We live in a society that uses statistics every day. You hear statistics on the news, you see it in the newspaper and you see it on the internet. In fact, just about every career uses statistics and colleges require a statistics course for a variety of majors.

Business decisions are made using statistics, politicians use statistics to determine the reliability of polls, advertising uses statistics to determine if their ads are making a difference, medical professionals use statistics to determine the reliability of medicines, and all consumers use statistics to make educated purchasing decisions.

### What is AP Statistics?

AP Statistics is an introductory college course where students learn different methods of collecting raw data, analyzing it and coming up with reasonable conclusions. In essence, it provides the student with the ability to look at information from a more critical point of view.

### How much college credit will I receive for passing the AP test?

Since this is an AP course, you will have the opportunity to take the AP Statistics Test given in May. If you score 3 or higher, you may receive college credit equivalent to one semester of college statistics.

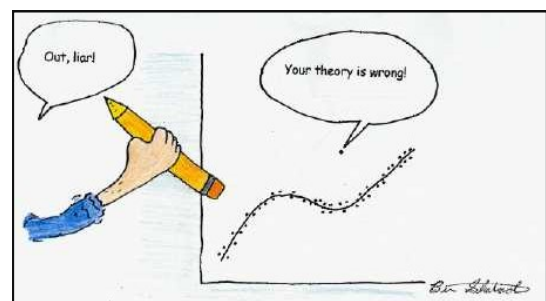
### How much math do I need for AP Stats?

The highest math class you need is Algebra 2 Trig (Regular or Honors). A good AP Stats student should be a critical thinker who is not afraid to work hard. The course requires your current teacher's recommendation. The course may be taken in conjunction with another math class; in fact, most students do.

### Who typically signs up for the class?

Even though only Algebra 2 Trig is required, most students taking AP Stats are college bound juniors or seniors with a background in Pre-Calculus or Calculus, and are looking to take an AP course to get college credit. They are typically students who are going into careers in various fields, including (but not limited to); business, medicine, pharmaceuticals, advertising, communications, government, politics, law and math.

\* Also offered is a 1 semester Probability & Statistics Class



# AP COMPUTER SCIENCE



Critical thinking, differentiated instruction, equity, knowledge utilization, rigor, and relevance, the latest staff development initiative here... AP Computer Science is a course that covers them all!

## What is AP Computer Science?

AP Computer Science is a Math Elective introductory college course where students learn object oriented programming using the Java programming language. Emphasis is placed on problem solving and program development.

## How much math do I need for AP Computer Science?

The highest math class you need to have completed is Geometry. The course does not require a teacher's recommendation. A good AP Computer Science student should be a critical thinker who is not afraid to work hard. This course may be taken in conjunction with another math class, because it is an elective.

## How much programming do I need for AP Computer Science?

No experience needed. A good AP Computer Science student should be able and willing to learn and work independently.

## Who typically signs up for the class?

Have you ever wished that math had more applications? Have you ever tried to make a program on your calculator? Have you ever wondered how a computer works? If you said yes to either of the questions above, then you are the student for this class. Freshmen to seniors are more than welcome if they meet the Math requirement. The typical students are going into careers in various fields with some type of Computer Technology.

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*The US Department of Education found that 85% of students who took AP courses continued their education after high school. The study also showed a strong correlation between participation in AP and degree completion.*

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## Other FAQ?

## Why take an AP Math Course in High School?

In high school there is more instruction/class time because it is a full year course which meets every day. In college, a semester course (half a year) and only meets 3 to 4 times a week. More time in class allows for a better understanding of the concepts.

Then, you will be able to apply the knowledge you have obtained in high school during your 1<sup>st</sup> semester of college.



## It's an AP class, so is it difficult?

An AP Course is a college course so the expectations are high. You will be expected to complete homework every night. For AP Stats, the homework required will be more reading and writing and less math computations. Also, in AP Stats, we rely heavily on calculators to help us with the rigorous computations and we use the results to write clear detailed conclusions with sound reasoning. For AP Computer Science, you will be expected to complete the homework and the programming assignments in a timely manner. Students in class are challenged to be active learners.

## Do I get college credit?

Since these are AP courses (Advanced Placement), you have the opportunity to take the AP Exam given in May; if you score 3 or higher, you may receive college credit.

## Contact Us

Email us for more information about our AP Math Courses

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