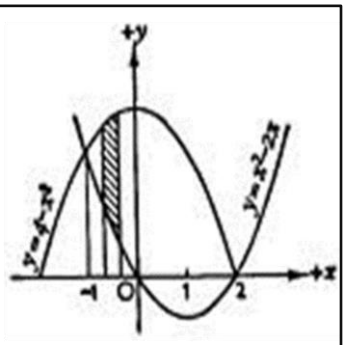
AP COURSE OFFERINGS IN THE MATH DEPARTMENT

Collin Hayes, Math Department Chair *2023-2024*

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. 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.

Blended AP STATISTICS option

Blended AP Statistics: the majority of instruction and activities will be in class for all. Possible Blended days might include small group help sessions/remediation. Work days or informational front-loading time. This is a new option and will be flexibly adjusted as needed by the teacher*

PROFILE of a BLENDED Student :

- autonomous/intrinsically self-motivated/independent
- Can use technology as a tool to learn / research and troubleshoot
- Self advocate & has a history of success in math classes

AP COMPUTER SCIENCE A

What is AP Computer Science A?

Students will develop coding and problem solving skills by learning to program in Java, a object oriented programing language. Learning to program in this course will help develop students' critical thinking, perseverance and problem solving skills.
Students will earn 1 year elective math credit.
College credit available upon successful completion of AP exam in May. For more information visit https://www.collegeboard.org/

How much math do I need for AP CS A?

Students need to have successfully completed 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.

Who typically signs up for the class?

Students who are interested in learning how to write, read, and analyze java code should take this course. We utilize a problem solving approach in this class, where algorithms are developed and programs are written to complete tasks. If you have no experience with programming, no problem! We will teach you to persevere in problem solving, to develop the logic of problem solving by creating programs and to diligently testing for error control.

See promo video link:
goo.gl/9hkEpv

AP COMPUTER SCIENCE PRINCIPLES

What is AP Computer Science Principles?

Students will learn about the internet, digital information, introduction to programming, privacy and build apps. The course will introduce students to the creative aspects of programming, abstractions, algorithms, large data sets, the Internet, cybersecurity concerns, and computing impacts. Programming will be done in a variety of platforms including Scratch, App Lab and Python.
Students will earn 1 year elective math credit.
College credit available upon successful completion of AP exam in May. For more information visit https://www.collegeboard.org/

How much math do I need for AP CS Principles?

Students need to have successfully completed Algebra 1 to be eligible for the course. 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.

Who typically signs up for the class?

This class is designed by College Board to be rigorous while opening opportunities to a variety of students; increasing the diversity of our AP offerings and the students taking them. Enrollment should be primarily based on interest; no previous programming experience required.

*AP Computer Science courses can be taken independent of each other.

See promo video link:
https://youtu.be/jQm0z894CG0

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 1st 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.

Metea LIFE

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.

Contact Us

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