

AP Calc AB/BC Summer GetAhead Program

This will be a challenging, yet eye-opening course. With exposure to real life scenarios in which calculus is used, students will explore/learn the very fundamentals of calculus. The purpose of this course primarily is to give students an in-depth understanding of the fundamentals of calculus. Collegeboard has provided the link below for a sample curriculum.

<https://apcentral.collegeboard.org/pdf/ap-calculus-ab-sample-syllabus-1.pdf>

AP Calc AB topics for summer:

- 1) Limits, continuity, and algebraic and graphical analysis
- 2) Fundamental theory, definition of a derivative, tangent line equations and trig derivatives
- 3) Derivatives applications with graphs – critical values and concavity
- 4) Derivatives chain rule, product rule, implicit, exponential
- 5) Derivatives with velocity, displacement and acceleration
- 6) Related rates
- 7) Optimization
- 8) Integrals (antiderivative) introduction and usage
- 9) Challenge problems and applications to real life

Costs & Timings:

Timings TBA (4 hours per week)

Cost: \$1000*

TOTAL HOURS: 30+ hours

*Discounts available for special cases & Weekly cost is \$135.

Materials needed:

- 1) 3-ring binder with paper
- 2) Pencils and pens
- 3) Calculator
- 4) Printer @ home

Note: Requiring students to bring their own binders only this summer.