

# HHS MATH DEPARTMENT

**COURSE: A.P. Calculus AB**

**1052/1053 (NCAA)**

**RIGOR: Accelerated**  
(Above grade level)

**Average**  
(On grade level)

**Essentials**  
(Core concepts)

**Pre-requisites: Honors Pre-Calculus with “B” or better**

**Course Description:** AP Calculus AB is roughly equivalent to a first semester college calculus course devoted to topics in differential and integral calculus. The AP course covers topics in these areas, including concepts and skills of limits, derivatives, definite integrals, and the Fundamental Theorem of Calculus. The course teaches students to approach calculus concepts and problems when they are represented graphically, numerically, analytically, and verbally, and to make connections amongst these representations. Students learn how to use technology to help solve problems, experiment, interpret results, and support conclusions.

<https://apcentral.collegeboard.org/courses/ap-calculus-ab/course?course=ap-calculus-ab>

## Course Syllabus:

### Semester 1

- I. Limits at a point, one-sided and limits involving infinity.
- II. Derivatives: definition, product/quotient rule, chain rule
- III. Application of derivatives
- IV. Integration

### Semester 2

- V. Integration (continued)
- VI. Differential Equations
- VII. Application of Integrals: area, volume of revolution
- VIII. AP Exam – early May
- IX. Integration techniques
- X. Polar plane and equations

**Expected Homework:** Daily assignments are due the next class period

**Late Work Policies:** Late homework will receive point deductions

**Grade Includes:** Tests, Quizzes, Homework, Projects