HHS MATH DEPARTMENT

COURSE: A.P. Calculus BC **1054/1055 (NCAA)**

RIGOR: **Accelerated** (Above grade level) **Average** (On grade level) **Essentials** (Core concepts)

Pre-requisites: A.P. Calculus AB with "B-" or better

Course Description: AP Calculus BC is roughly equivalent to a second semester college calculus course and extends the content learned in AB to different types of equations and introduces the topic of sequences and series. The AP course covers topics in differential and integral calculus, including concepts and skills of limits, derivatives, definite integrals, the Fundamental Theorem of Calculus, and series. 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-bc/course?course=ap-calculus-bc

Course Syllabus:

Semester 1

I. Review of derivatives and integrals
II. Integration techniques
III. L'Hopital's rule and improper integrals
IV. Application of Integrals: area, arc length volume by disk, washer, and shell
V. Differential equations with logistic equations

Semester 2

VI. Sequences
VII. Series
VIII. Parametric equations, polar coordinates and vectors
IX. AP Exam – early May
X. Matrices

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