AP Calculus BC Syllabus

Course Description:
AP Calculus BC is roughly equivalent to both first and second semester college calculus courses 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. Students who are enrolled in AP Calculus BC are expected to:

- Work with functions represented in multiple ways: graphical, numerical, analytical, or verbal. They should understand the connections among these representations.
- Understand the meaning of the derivative in terms of a rate of change and local linear approximation and use derivatives to solve problems.
- Understand the meaning of the definite integral as a limit of Riemann sums and as the net accumulation of change and use integrals to solve problems.
- Understand the relationship between the derivative and the definite integral as expressed in both parts of the Fundamental Theorem of Calculus.
- Communicate mathematics and explain solutions to problems verbally and in writing.
- Model a written description of a physical situation with a function, a differential equation, or an integral.
- Use technology to solve problems, experiment, interpret results, and support conclusions.
- Determine the reasonableness of solutions, including sign, size, relative accuracy, and units of measurement.
- Develop an appreciation of calculus as a coherent body of knowledge and as a human accomplishment.

Additional Materials Required:

- CALCULUS: EARLY TRANSCENDENTALS 8TH EDITION BY JAMES STEWART
    - ISBN-13: 978-1285741550
    - ISBN-10: 1285741552

- Graphing Calculator

- *The textbook below is required to purchase for Semester B (Jan-May)*
    - Cracking the AP Calculus BC Exam, 2020 Edition
    - ISBN-13: 978-0525568162
- ISBN-10: 0525568166

Student-Teacher Conferences:
Office Hours. Students can schedule up to three (3) Student-Teacher Conference over the duration of the course. These meetings are optional, and attendance will not affect your grade.

To schedule an office hour with your teacher to please visit the Student Resources page on waonline.org.

Washington Academy Grading Scale:
A = 100 - 93
B = 92 - 85
C = 84 - 76
D = 75 - 70
F = 69 or less