

AP Calculus BC

Disclosure Statement

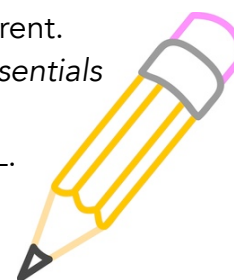
◆ 2023-2024 ◆ Paul Stemle ◆ Room 3107 ◆

Welcome! I am excited to have you in class this year. Calculus is the science of change and an analysis of infinity. This course will give you a strong foundation in *dynamic thinking* that you will continue to use in everyday decisions.



Materials

You will need a **graphing calculator** for both classwork and tests. Nearly every model of graphing calculator is allowed on the AP Calculus Exam. We will use the TI-84 Plus and the TI-Nspire for in-class demonstrations, both of which are available to rent. The school will also provide you a copy of our **consumable text**, *The Essentials of Calculus* by Gary L. Taylor and J. Michael Shaw. You may check out a traditional textbook, *Calculus: Graphical, Numerical, Algebraic* by Ross L. Finney, for bonus reference material at home. Parents are welcome to make an appointment to visit the classroom to view the instructional materials being used in class.

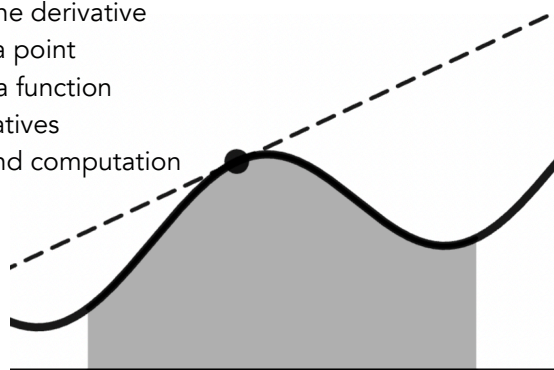


Course Objectives

Calculus BC is comprised of five main concepts established by the College Board.

derivatives ^{AB/BC}

- ◆ concepts of the derivative
- ◆ derivative at a point
- ◆ derivative as a function
- ◆ second derivatives
- ◆ application and computation

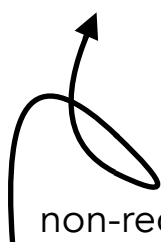


functions/graphs/limits ^{AB/BC}

- ◆ analyses of graphs
- ◆ limits of functions
- ◆ asymptotic and unbounded behavior
- ◆ continuity as a property of functions

integrals ^{AB/BC}

- ◆ interpretations and properties of definite integrals
- ◆ the fundamental theorem of calculus
- ◆ techniques of anti-differentiation
- ◆ numerical approximations to definite integrals



non-rectangular modes ^{BC}

- ◆ polar functions
- ◆ parametric equations
- ◆ vector-valued functions

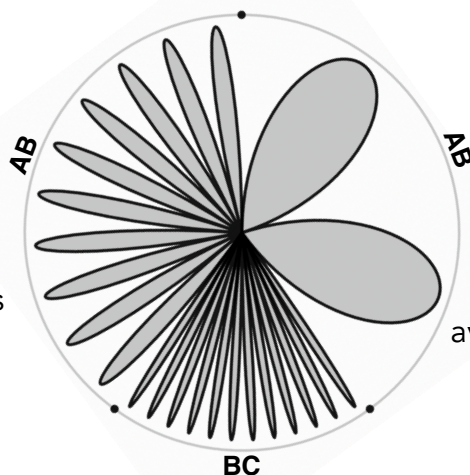
sequences and series ^{BC}

- ◆ series convergence
- ◆ power series
- ◆ Taylor series
- ◆ alternating series
- ◆ comparison and ratio tests



Grading

Daily **quizzes** (40%) validate your understanding of each assignment with every question coming directly from the homework. Your three lowest quiz scores will be dropped each term.



Unit **tests** (40%) simulate the AP-testing experience with multiple-choice questions, free-response questions, and a heavy scoring curve. An optional final exam is available each term to replace your lowest test score.

In an AB classroom, we will sneak **BC worksheets and quizzes** (20%) on the side. You will have four class periods to finish each worksheet (for a completion grade). A quiz will follow each worksheet, and you may retake each BC quiz once.



Calendar

Term 1: ♦ Unit 1 Test ♦ Unit 2 Test ♦ optional final

Term 2: ♦ Unit 3 Test ♦ Unit 4 Test ♦ Unit 5 Test ♦ optional final

Term 3: ♦ Unit 6 Test ♦ Unit 7 Test ♦ optional final

Term 4: ♦ Unit 8 Test ♦ Unit 9 Test ♦ optional final ♦ AP Exam (May 13)

Class Website stemle.weebly.com/bc

Visit our website for class news, homework info, and math tools.

Getting Help

I am always happy to work with you before school or after school. Stop by for homework help or to study with a group. Parental involvement and communication is also welcome — contact me at paul.stemle@slcschools.org.

