

AP CALCULUS BC
MR. MCGLONE
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COURSE REQUIREMENTS

Welcome to AP Calculus BC. This course is the pinnacle of all mathematics courses offered in the Central Bucks School District. Successful completion of this course and the subsequent AP exam (**Tuesday, May 14, 2019, morning**) could earn you as many as 8 college credits and placement out of Calculus I and/or Calculus II in most colleges.

CLASS PROCEDURES

1. The student is expected to be in class every day and to be on time. Being on time means being in class *before* the bell. Lateness will be handled in accordance with school policy as outlined in the student agenda handbook (remember, 3 lates = 1 cut).
2. If the student is absent from school for any reason, the student is responsible for all missed assignments. Check the website for homework assignments and class notes. Missed tests/quizzes must be made up in a timely fashion.
3. Required materials for class include the textbook (*Calculus: Graphical, Numerical, Algebraic*, Finney, Demana, Waits, Kennedy), notebook (3-ring is recommended), pen or pencil, and calculator. You may use a graphing calculator; I have some that may be used during class but they may not be taken home. If you are going to purchase one of your own, get the TI-84+ or the TI-89. Please note that while the TI-89 may be used on the advanced placement exam, it may NOT be used on some in-class assessments or the district final exam. Bring all of these materials to class everyday.
4. Notebooks are not graded, but taking notes is invaluable in this course. Notes given in class emphasize topics that you need to know well. Also, there are some topics that will be treated differently than those in the textbook.
5. Homework is assigned almost daily and will be checked occasionally. For full credit on homework, you must show all necessary, non-trivial work. Every student starts a marking period with 80 points out of 100 toward homework. For each assignment missed, 4 points are deducted. Points can be regained by volunteering to put problems on the board as outlined during the first week of class. The final percentage counts 10% of the marking period grade. It is crucial that you do homework daily. The pace of the course dictates that you put in a daily effort that includes homework completion and studying.

GRADING

1. Tests will be announced approximately 2 to 5 days prior to the day of the test. Quizzes may or may not be announced (for the most part, they will be announced). You can expect at least one test per chapter, with the exception of the first three chapters. Tests may consist of calculator and non-calculator sections.

2. Marking period grades are determined as follows:

Tests/Quizzes/Other: 90% Homework/Classwork: 10%

3. Final grades are calculated as follows:

Marking Periods 2, 3, and 4: 26.67%, 26.67%, 26.67%
Core Assessments (2) 6%
Final Exam: 14%

4. The grading scale is the standard Central Bucks ten-point scale.

5. Feel free to contact me via e-mail if you have any questions or would like to schedule time for extra help. This has worked well in the past particularly if students have been absent and want to get missed assignments.

COURSE OUTLINE:

Chapter 1: Prerequisites for Calculus: lines, functions (exponential, logarithmic, trigonometric), parametric equations

Chapter 2: Limits and Continuity: rates of change, limits involving infinity, tangent lines

Chapter 3: Derivatives: differentiability, rules, velocity, trig functions, chain rule, implicit differentiation, inverse trig functions, and exponential/logarithmic functions

Chapter 4: Applications of Derivatives: extreme values, mean value theorem, curve sketching, modeling and optimization, linearization, related rates

Chapter 5: Definite Integrals: finite sums, antiderivatives, fundamental theorem of calculus, trapezoidal rule

Chapter 6: Differential Equations and Mathematical Modeling: slope fields, substitution, integration by parts, exponential growth/decay, population growth, numerical models

Chapter 7: Applications of Definite Integrals: net change, area, volume, length of curve, applications

Chapter 8: L'Hopital's Rule, Improper Integrals, Partial Fractions

Chapter 9: Infinite Series: power, Taylor, and Maclaurin series; Taylor's theorem; radius of convergence

Chapter 10: Parametric, Vector, and Polar Functions

AP Examination Review

Post-Exam Topics: Conic Sections, Differential Equations

ACADEMIC INTEGRITY POLICY

Students are expected to meet academic challenges with the highest degree of integrity and honesty. When questions arise about research or learning activities, students should demonstrate the discipline necessary to seek guidance from their teacher, rather than resorting to inappropriate behaviors that may undermine their own academic integrity and the learning process.

All students should read and understand the **CBS Academic Integrity Policy**, and ask questions or seek clarification if they are unsure of how that policy relates to academic work in general or to specific assignments for this course. Consequences will result when this policy is violated.