

**Course Title: Advanced Placement Calculus (Bc)\* 1202320**

Before studying calculus, all students should complete four years of secondary mathematics designed for college-bound students: courses in which they study algebra, geometry, trigonometry, analytic geometry, and elementary functions. AP Calculus BC is an extension of AP Calculus AB: the difference between them is scope, not level of difficulty. AP Calculus AB includes techniques and applications of the derivative, the definite integral, and the Fundamental Theorem of Calculus. It is equivalent to a semester of calculus at most colleges and universities. AP Calculus BC includes all topics in AP Calculus AB, plus others such as parametric, polar, and vector functions, and series. It is equivalent to one year of calculus at most colleges and universities. AP Calculus BC covers differential and integral calculus, including concepts and skills of limits, derivatives, definite integrals, the Fundamental Theorem of Calculus, and series. Students learn to approach calculus concepts and problems when they are represented graphically, numerically, analytically, and verbally, and to make connections among these representations. Essential to success in this course is a high level of expertise with the Texas Instruments TI-83 or TI-84 graphing calculator to include multiple operations, memory management, intermediate programming and visual interpretation. A graphing calculator is suggested for the AP exam, and students are expected to purchase his or her own. One year of experience with the TI-83 prior to this course is required. The TI-86/85/82 are acceptable, but will not be taught. Only the best math students with the strongest background should register for AP Calculus. TI-89 will not be used in this course.