

AP CALCULUS AB

The purpose of this institute will be to familiarize participants with the Redesigned AP Calculus Curriculum Guide which went into effect in 2016-2017 school year and to work on strategies that help students master the Enduring Understandings of the course. All of the major topics in the AB syllabus will be covered with an emphasis on graphical and numerical analyses along with traditional symbolic and verbal manipulations. Activities that promote student understanding as well as an emphasis on difficult or confusing topics for students will be explored for classroom trouble-shooting techniques (TI-84 will be used, when applicable). Special attention will be given to assessment of written student responses to facilitate improvement and success. Along with the 2018 Free Response Questions, released Multiple Choice Questions (2003, 2008, 2012) as well as College Board Sample Multiple Choice Questions will be discussed. Furthermore, AP Central will be used as a valuable resource for instruction and assessment.

Workshop activities include:

Introductions and Review of the College Board Workbook

Overview of the AP Program

- Prerequisites
- Timelines
- Syllabi & Audit

Sharing Strategies for Classroom Success

Using Internet Resources (AP Central, etc.)

Working through Limits & Continuity (including L'Hopital's Rule)

Reviewing Derivatives

Exploring Applications of the Derivative (Curve Sketching, Particle Motion, Optimization, Related Rates, Mean Value Theorem, Average & Instantaneous Rates of Change)

Reviewing Definite & Indefinite Integrals

Exploring Applications of Antiderivatives & Definite Integrals (Riemann Sums & Trapezoidal Approximations, Particle Motion, Area, Volume, Accumulation, & Average Value)

Working with Separable Differential Equations & Applications (including the use of Slope Fields)

Developing Successful Exam Review Strategies

Discussing 2018 Free Response Questions

Exploring Changes in May 2017 & 2018 Tests and Classroom Implications/Strategies

***Wherever Applicable, other Free Response Questions will be used to facilitate understanding of calculus topics and student understanding.