2015 ADVANCED PLACEMENT INSTITUTE
JUNE 21-JUNE 26

COURSE DESCRIPTION

SUBJECT: Calculus AB

TARGET AUDIENCE:
This course is designed to meet the needs of beginning teachers of Advanced Placement Calculus AB, and for teachers interested in reform calculus teaching strategies. An important feature of the week will be the integration of the graphing calculator in teaching topics.

COURSE OBJECTIVES:

1. To present the major topics of an AP Calculus course from a numerical, graphical, analytical and written point of view—the “reform” spirit.
2. To integrate graphing calculator technology in calculus instruction.
3. To review the 2015-2016 curriculum and exam revisions and cover new topical emphases implied by these changes, including the graphical interpretations of differential equations (slope fields), as well as, the Fundamental Theorem of Calculus.
4. To review the newly released 2015 exam, and to analyze topics which tested poorly.
5. To share and discuss the problems and promises of beginning an AP course.
6. To preview reference materials and texts appropriate for use in AP calculus.
7. To outline lesson plans, develop teaching strategies and formulate alternative forms of evaluation for use in the classroom.
8. To provide strategies for enhancing student question writing skills.

FORMAT:
Curriculum topics will be introduced via lecture and demonstration, problem solving activities, calculator lab activities and cooperative learning projects. Group discussions will focus on the issues of teaching an AP Calculus course--such issues to be determined from the needs and interests of the participants at the institute. Some issues identified for discussion in the past: student selection, prerequisite coursework, homework, grading, AP exam preparation, etc. The spirit of the “Calculus reform” will be emphasized.

REQUIREMENTS, ASSIGNMENTS, ETC.:
Participants are encouraged to bring their course textbook and any support materials they plan to use and/or have used and would like to share with the group. Each participant should bring the graphing calculator they will use in their classroom. The Texas Instruments TI-84 and TI-89 will be used by the instructor for demonstrations. TI-89s will be available for use during the week for anyone desiring to use same. Each participant will receive a notebook of curriculum topical developments cross referenced with technology support and AP examination questions. Sample questions which highlight daily topics will be given for overnight review. Teachers are encouraged to customize the materials for use in their own settings.