COURSE:	AP CALCULUS
INSTRUCTOR:	Al Bierschbach
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TEXTBOOK:	CALCULUS OF A SINGLE VARIABLE SEVENTH EDITION ISBN# - 0-618-14913-0
ADDITIONAL: MATERIALS RECOMMENDED	GRAPHING CALCULATOR

COURSE DESCRIPTION:

This course is intended for use by a wide variety of students. It provides preparation for those who intend to continue their study of mathematics whether in the direction of the natural or physical sciences, or in the direction of the social sciences. The study of calculus will deal with the concepts of differentiation, integration and limits. Calculus techniques will be applied to solve problems in the areas of optimization, related rates, areas and volumes, and curve sketching. The AP exam is an option in the spring.

Goals

• Students should be able to work with functions represented in a variety of ways: graphical, numerical, analytical, or verbal. They should understand the connections among these representations.
• Students should understand the meaning of the derivative in terms of a rate of change and local linear approximation and should be able to use derivatives to solve a variety of problems.
• Students should understand the meaning of the definite integral both as a limit of Riemann sums and as the net accumulation of change and should be able to use integrals to solve a variety of problems.
• Students should understand the relationship between the derivative and the definite integral as expressed in both parts of the Fundamental Theorem of Calculus.
• Students should be able to communicate mathematics and explain solutions to problems both verbally and in written sentences.
• Students should be able to model a written description of a physical situation with a function, a differential equation, or an integral.
• Students should be able to use technology to help solve problems, experiment, interpret results, and support conclusions.
• Students should be able to determine the reasonableness of solutions, including sign, size, relative accuracy, and units of measurement.
• Students should develop an appreciation of calculus as a coherent body of knowledge and as a human accomplishment.

GRADING:

Primarily their scores on section quizzes and chapter tests determine a student's final grade. While daily work is seldom graded, its completion is crucial to the success of the student. A comprehensive final is also given.

CLASS GUIDELINES:

1. Students are expected to be active participants in class.
2. Students should treat themselves, their classmates and teacher with respect.