

# **CALCULUS**

## **TEXT**

Calculus: Early Transcendentals

## **PREREQUISITES**

Algebra II and Trigonometry/Pre-Calculus with a grade of B or better and a contract stating mutually agreed upon goals.

## **OBJECTIVES**

To learn and understand the basic concepts of calculus and apply them in problem solving.

## **CONTENT**

An investigation of the properties of continuous functions and limits, the rules of differentiation and their applications including max and min values and Newton's Method, integration and its application to area between curves and volume of revolved functions. Also included are some techniques of integration such as integration by parts.

## **SKILLS**

- Exposure to college level class structure
- Independent learning
- Problem solving
- Cooperative learning

## **METHODS**

Lecture and problem solving format. Demonstration of learning and understanding of concepts will be through successful completion of tests, quizzes, and problem solving. Much of each class period is set aside for daily work in cooperative groups, individual instruction, formal peer tutoring and working on assigned study and problems.

## **HOMEWORK**

Students are responsible for completing assignments that cannot be completed during class time and study for quizzes and tests.

## **GRADING/CREDITS**

Grades are based on tests (40%) quizzes (25%) daily assignments (25%) and participation (10%). To obtain credit, all chapters must be completed at the level of the quality of work above the 60th percentile or above.

### **INDIVIDUALIZATION**

As much individual instruction as possible will be given to students, both in and outside of the classroom, to meet student needs. Students may "challenge" a chapter whenever they feel their learning is sufficient to move faster than the body of the class. Contractual arrangements between a student and the teacher are flexible, but always include individual demonstration of mastery.

### **ABSENCES/TARDIES**

Students are responsible for all assignments and information and completion of quizzes, or exams including those given when the student is absent or tardy.