

## AP Calculus BC

Mr. Sanders  
Room K109

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### Course Description

AP Calculus BC primarily develops students' understanding of the major concepts of calculus. It gives experience with its methods and applications. The course presents concepts, results, and problems in graphical, geometric, numeric, analytical, and verbal forms. The course weaves together limits, derivatives, integrals, sequences and series, applications, approximations, and modeling. AP Calculus BC students study the topics covered in a typical college Calculus I & II courses. Students can get credit for both semesters or for just Calculus I. The BC course is the prerequisite for Multivariable Calculus, also known as Calculus 3. Some colleges offer a credit exam for this course which has been at RPHS for 4 years now.

### Textbook

Calculus, 10<sup>th</sup> Ed., AP Edition by Larson, Edwards (It is the thicker of the two calculus texts here.)

### Materials Needed:

1. Calculator (Recommended TI N-SPIRE CX or CAS). It is *wise* to use the same one that you will use on AP exam.
2. Loose-leaf notebook paper, a small ring binder, & graphing paper. You must have a *dedicated* math notebook. No spiral notebooks or their spiral chads, please.
3. #2 Pencils (preferably mechanical), Color Pencils/Pens/Markers, & Erasers.

### Semester 1

Functions and Graphs  
Limits and Continuity  
Concept of Derivative  
Local Linearity & Differentiability  
Computation of Derivatives  
Applications of Derivatives  
Antiderivatives  
Riemann Sums  
Fundamental Theorem of Calculus  
Functions Defined by Integrals  
Techniques of Antidifferentiation  
Numerical Approximations  
Differential Equations  
Slope Fields & Euler's Method

### Semester 2

Area & Volume  
Definite Integral as Accumulator  
Integration Techniques  
Logistic Growth  
Parametric Functions  
Polar Functions  
Vectors  
Converge & Diverge  
Taylor Polynomials  
Power Series  
Review for AP Exam:  
**Monday, May 13<sup>th</sup>**

## **Grading**

50%--Major Grades: Tests

50%--Daily Grades: Quizzes, Projects, HW, etc.

Progressive testing. No retesting.

Late work: One day – 85 max; Two days – 70 max; Three days – 55 max; Four days – no credit. This is all per FBISD policy

## **Classroom Rules:**

- Be in class on time AND stay in class.
- Be prepared for class. (awake, notebook, pencil, calculator and assignments)
- Be on task. (doing assigned work)
- No cell phone. Not even a little bit. Seriously.

## **Contact**

Conference Period: 2<sup>nd</sup>

Room: K109

Phone: 281-634-7720

E-mail: [john.sanders@fortbendis.com](mailto:john.sanders@fortbendis.com)

Tutorial: Tuesday afternoon; Thursday morning & afternoon; and also by appointment.

## **Procedures**

Expected behavior is discussed the first day of class. Additional procedures as required.

## **Make-up Policy**

Make-up work is the student's responsibility. All tests and quizzes will be made up in tutorials. When you return to class, you are responsible for all work assigned prior to you missing class.

## **Website & Schoology**

Please visit both for pertinent information.

The official site for all assignments is Schoology although most of those assignments will be completed and submitted in AP Classroom.

Please have your parents or guardians look over this with you.

You have better things to do your first year of college than to pay big money to retake this course. So please make a serious effort, for your own sake.