

AP Calculus BC 2011 – 2012
Teacher: Mr. Scott, Room 366
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- I. **Overview:** This is a college level course designed to meet the calculus content as denoted by the College Board. The course includes both differential and integral calculus with an emphasis on building an understanding of the principles of calculus through problem solving. Students are expected to take the AP examination during school in May. Some colleges award three or more college credits to students who are successful (score a 3 or higher) on this examination. Other colleges require students to score 4 or higher on the exam to earn college credit.
- II. **Objectives:** Students will:
- A. Apply the concepts of limits in graphing, differentiation and the integration of algebraic and transcendental functions.
 - B. Examine the inter-relationships between numerical, graphical, and analytical approaches to problem solving.
 - C. Apply the fundamental concepts of differentiation and integration to applications in the physical and social sciences
 - D. Use technology to explore fundamental concepts of calculus and to assist in problem solving.
 - E. Develop expository writing skills associated with problem solving
- III. **Course Content:**
- A. Limits and continuity
 - B. Derivatives of functions
 - C. Applications of the derivative
 - D. The integral
 - E. Applications of the definite integral
 - F. Techniques of integration
 - G. Infinite series
 - H. Differential equations
 - I. Polar curves and vector valued functions
- IV. **Materials:** Each student will be issued the textbook Calculus: Graphical, Numerical, Algebraic by Finney, Demana, Waits & Kennedy. While a notebook of some type is required, a three-ring binder with plenty of loose-leaf paper is highly recommended. Because this course relies heavily on the use of a graphing calculator, all students are required to bring one to class daily. The TI-83+ or TI-84 are the preferred calculator models, but others have sufficient capabilities. If students do not have their own graphing calculator, they may borrow one from the school.

V. **Evaluation:** Grades will be based on quizzes, homework, unit tests and other collected assignments. All graded work will be in one of the following categories:

Homework and assignments graded for completion	10% of the grade
Quizzes and smaller assessments	40% of the grade
Unit tests and other larger assessments	50% of the grade

- Students may retake ONE assessment each quarter from a selected group of assessments with the following guidelines:
 - Students will be told in advance which assessments will be eligible to be their ONE retake.
 - To be eligible for a retake, students must go over the original assessment with the teacher
 - The second grade will be the grade entered; whether it is higher or lower.
 - A retake must be completed within one week of when the original assessment is returned to the student.
 - Unit tests and other summative assessments may NOT be retaken.

VI. **General Information**

- A. If you are absent, you are responsible for making arrangements with the teacher to make up any missed assignments or quizzes. The deadline for turning in late assignments is the unit test for that topic.
- B. Additional help is available almost every day before school, after school and during the second half of lunch (except on Thursday). I sometimes have meetings on Mondays. I am available most other days after school.
- C. The best way to reach me is via email.
- D. Copies of in-class presentations and homework assignments will be posted on Edline.

VII. **Attendance:** If a student is not prepared to begin work when the bell rings, he or she will be marked tardy. If a student is tardy without a pass, he or she will have lunchtime detention. Any student who is absent without a valid excuse five times in one semester will fail the class. If this happens, students and parents will have the opportunity to appeal the decision.

VIII. **Other**

- All school rules apply. Cell phones and any electronic device must be turned off and out of sight. I will give no warnings. If I see it, I call security and they will take it.
- Get to class on time. Instruction begins when the bell rings.
- No eating in the classroom. Students may drink water only in class.
- No sleeping in class.
- Do not work on assignments from other classes.