



To students expecting to take AP Calculus and their parents,

I'm very excited about teaching you Calculus this year and I hope you are looking forward to it as well. Students often want to know just what Calculus is. Calculus is a branch of math that allows us to describe how things change over time. If math before Calculus can be compared to a photograph, then Calculus is more like a video. Calculus is based on all the math you have learned so far, especially algebra, geometry and trigonometry, and you need to have a good grasp of all this material to succeed at Calculus.

What are the advantages to taking AP Calculus?

- AP Calculus can help you earn college credit, depending on what university you plan to attend and what your intended major is. Different college programs require different AP Calculus exam scores. For example, at UNC, a score of 3 or better will earn a math credit. At NC State, a score of 3 gives credit only after the next course is completed with a 'C' or better, while a score of 4 or 5 gives credit immediately.
- A few college programs do not accept AP Calculus for credit. In that case, it can still be to your advantage to take AP Calculus to prepare for a college Calculus class.
- Even if you do not need Calculus for your college program, many Calculus students find that their algebra skills are greatly strengthened and that this prepares them for whatever future math and science courses they may take.

In AP Calculus, you will briefly review algebra, geometry and trigonometry concepts, and then learn about

- Limits and Continuity
- Derivatives
- Applications of derivatives
- Integrals
- Applications of integrals
- Differential equations (introductory)

The amount of information to learn is small compared to AP history classes or AP Biology, but you must learn it in great depth and understand how the various concepts work together. For example, you must be able to solve problems analytically (using an equation), graphically, and numerically and be able to translate easily among these forms. It is also a requirement that you know how to work problems with and without a graphing calculator. In addition to solving problems, you will also need to understand and apply Calculus theorems.

Homework requirements for the class will average about one hour a night and additional study will be required before quizzes and tests. Because of the requirement for *depth* of understanding, your success depends on your being willing to read, practice and study until you really grasp the material, even if this is more than what is assigned.

In light of the foregoing, I ask you and one of your parents or guardians to sign their name below acknowledging that you have read this memo and accept the challenge and responsibility of this class.

Yours in Christ, Ms. Herrington

_____ Student Name _____ Date

_____ Parent/Guardian Name _____ Date