Instructor: Timothy Kohl  
Office: MCS 235  
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E-mail: tkohl@bu.edu (I read my e-mail throughout the day!)  
Office Hours: T 3-4, W 3-5, and by appointment.  
Lecture: SCI 107 - MWF 12:00 PM - 1:00 PM  
Discussion C2: PSY B53 - M 2:00 PM - 3:00 PM  
C3: PYS B53 - M 3:00 PM - 4:00 PM  
C4: PYS B47 - M 4:00 PM - 5:00 PM  
C5: PYS B49 - T 8:30 AM - 9:30 AM  
C6: PYS B51 - T 9:30 AM - 10:30 AM  


Remarks: In this class we shall introduce the principles of calculus, beginning with the most fundamental notion, that of a limit. The study of limits is what separates calculus from subjects like algebra, geometry and trigonometry. The reason for this is that limits allow us to examine the dynamic behavior of functions, specifically to examine what happens to the behavior of a function as the variable is approaching a given value. Proceeding further, we shall develop the concept of the derivative of a function, beginning with the geometric notion of a ‘tangent line’ and then formally define the process known as differentiation. We will examine the properties of the derivative as well as its many applications, not only those in mathematics, but also in the sciences such as physics. Indeed, it was the desire to understand the laws of motion and gravity that led to the development of the calculus in the first place! We shall also introduce the other branch of calculus known as integration, which is another analytic tool, that is a counterpart to differentiation, but, at the same time, intimately related to it.

Outline of topics to be covered:  
(Note: Not all sections in a given chapter are covered.)

Functions - Chapter 1  
Limits and Derivatives - Chapter 2  
Differentiation Rules - Chapter 3  
Applications of Differentiation - Chapter 4  
Integrals - Chapter 5

Discussion: You must be registered for one of the discussion sections for this class (C2-C6) in addition to the lecture (123 C1). The discussion period will be used for going over homework, and is an excellent opportunity for you to see certain questions worked out in more detail than you would in class, or in the textbook. This is a resource you are strongly encouraged to take advantage of.

Exams: During the semester, there will be two exams worth 100 points each, as well as a final exam worth 200 points. The schedule for these exams is given on the next page.
Calculators: Since one of the main applications of calculus is to determine the behavior of functions and therefore the shape of their graphs, we will not have need for calculators (graphical or otherwise), and on exams, their use will not be permitted.

Homework: During the semester, I will generally assign homework on a daily basis. This homework is your primary means of learning the material, even more so than the lectures. Indeed, it is only by actually working out the solutions to problems that one really learns this material. Not doing homework is a bad idea and will result in a poor performance in the course.

Additionally, there will be, throughout the course of the semester, 10 turn-in homework assignments, each worth 10 points, for a total possible maximum of 100 points if you complete each perfectly. Each turn-in assignment will be due by the next class meeting after it was assigned, unless otherwise indicated.

Grading: Your grade in the course will be based on the combined sum of the two exams, 10 homeworks, and the final exam, out of a maximum possible total of 500 points.

Makeup Exams: Except in cases of illness, and then, only with a signed doctor’s note, exams will be given only at scheduled times.

Cheating: I consider cheating and plagiarism to be very serious offenses, and any cases of it will merit action by the University Academic Standards Committee.

Important Dates:

Holidays: Monday October 10
            Friday November 11
            Thanksgiving Break: Wednesday November 23 - Friday November 25

Exam 1 – Friday October 14
Exam 2 – Friday December 2
Final     - Tuesday December 20, 3-5 PM

Last Day to Withdraw (without receiving a 'W') - Friday October 7
Last Day to Withdraw (with a 'W') - Friday October 28

The last lecture will be Monday, December 12.

Tutoring Room: In room MCS 144 is the math department’s tutoring room which is staffed by graduate students and open from 9-5 daily. If you need additional help, this resource is available.

Web Page: There is a web page for the course where you can find the homework assignments listed, as well as the syllabus and other materials that will be made available during the course.

The URL is:

http://math.bu.edu/people/tkohl/teaching/current/