

MAT 241: Calculus I  
Section 07  
John Jay College  
Fall 2009

*Meeting info:*

*Time:* MW 12:30-1:45 PM (period 4)

*Place:* N2512

*Instructor:* John Bryk ([jbryk@jjay.cuny.edu](mailto:jbryk@jjay.cuny.edu))

*Office:* I don't have one yet! You can find me wandering about the math department (4th floor, North Hall) for the time being.

*Office hours:* For the beginning of the semester, let's do TuTh 1-2 PM; once we all settle into our schedules, I'll raise the issue of office hours again, and we can switch things around if need be.

*Text:* *Calculus: Early Transcendentals*, 6th Edition (ISBN 0-495-38343-0) by James Stewart, published by Thomson Brooks/Cole, 2008

*Website:*

*Course:* <http://jjcweb.jjay.cuny.edu/jbryk/mat241/f09/>

*Personal:* <http://jjcweb.jjay.cuny.edu/jbryk/>

*Warning:* This is my first semester at John Jay! I am excited to be here, but I am still getting used to the peculiarities of the school. I will do my best to guarantee that the policies I detail here do not change, although I cannot guarantee this should my policies contradict those of the department or school. Of course, I will let you all know should anything change.

*Grading scheme:* The breakdown of your grade appears to the right. The numbers in the second column are percentages.

*Quizzes:* After the first week, there will be a ten-minute, two- or three-question quiz each Monday unless stated otherwise. *Calculators are not allowed on any quiz.* The quiz will cover the material presented during the previous two lecture meetings. Each quiz will be weighted equally to determine your quiz grade. Your lowest quiz grade will be dropped.

*Homework:* Homework will be assigned most lectures. The homework will be on the material covered that day. All homework assigned during a given week will be due the following Monday. The lowest homework grade will be dropped.

Some weeks I might feel like switching things up a bit, and I may have us do some group work in class which I want written up. This will be graded like regular homework, and I'll explain in detail what I expect.

For the time being, homework will be written. However, I am in the process of setting up a WebAssign account for our class. Once this is up and running, I'll give you the details on how this works.

*Exams:* There will be two seventy-five-minute midterm exams and one (I believe) two-hour final exam. *Calculators are not allowed on my exams, but they may be allowed on the final--I have to check with the department.*

I have not yet decided on the dates for each of the two exams. I will let you know the exact date at least 3 weeks in advance, and I will let you know the exact material is covered at least 1 week in advance.

The final exam will be cumulative. *There is a departmental requirement that a student must earn a grade of 40% or greater in order to pass the course: in other words, you must have a passing grade*

Homework	15
Quizzes	15
Midterm I	20
Midterm II	20
Exam	30

OVERALL and at least a 40% on the final to pass. The time and location will be determined later in the semester; I will inform you as soon as I have this information.

*Makeup policy:* Except in extreme circumstances, I do not accept late work, nor do I give make up quizzes. If you think you qualify for “extreme circumstances”, talk to me or otherwise contact me *prior to or on the day of the quiz/the day the work is due/whatever*; I will not be so forgiving if you contact me the next day or later. If you know you are going to be missing a lecture, recitation period, or, most importantly, an exam, *let me know 2 weeks in advance and we can work something out*. If you have regular obligations that may affect your work in this class, *let me know now!* If you wait, I will not be willing to compromise.

*Academic integrity:* None of you are going to cheat in this class, so this is superfluous, but please be aware of CUNY’s policies on academic dishonesty (<http://web.cuny.edu/academics/info-central/policies/academic-integrity.pdf>). I don’t mind if and in fact encourage you to work on homework together, but when it comes to quizzes and exams, you’re on your own.

*Course description:* We will cover four topics in this course which roughly correspond to the four chapters we will be covering.

1. *Limits:* The fundamental notion of calculus is the limit. Virtually all of the things we will study in calculus are ultimately defined in terms of the limit. What is the limit? Well, we’ll see in a couple of days...
2. *Derivatives:* In algebra, we learned how to find the slope of a line. One can ask whether there is a good notion of “slope” or “rate of change” for more general functions. The answer is YES, and this notion is the derivative. Although defined in terms of limit, we will find that there are simple rules which make calculating with derivatives (relatively) painless.
3. *Applications of Derivatives:* I claim that the modern world would not exist as it does today without calculus. All branches of modern science (and many other disciplines) use calculus. Really. Name a branch and I’ll apply calculus to it. Even if nobody takes me up on this offer, we’ll look at some applications and, hopefully, see that calculus immediately gives us very powerful results in a wide variety of areas.
4. *Integrals:* In geometry and trigonometry, we learned how to find the area of triangles, squares, and other polygons. But the world is not made up of polygons, and so we’re limited as to what areas we can calculate. How can we go about finding the area of more complicated shapes? The answer is the integral. We will only touch on this topic, but depending on the time we have, we may see that there is a surprising and fundamental relationship between the derivative and the integral...

*Possible syllabus:*

8/31	Chapter 1	9/30	3.2	11/2	3.10	11/30	4.9
9/1	2.1	10/5	3.3	11/4	4.1	12/2	5.1
9/9	2.2	10/7	Midterm I	11/9	4.2	12/7	5.2
9/14	2.3	10/14	3.4	11/11	4.3	12/9	Review/Catchup
9/16	2.4, 2.5	10/19	3.5	11/16	Midterm II		
9/21	2.6, 2.7	10/21	3.6, 3.7	11/18	4.4		
9/23	2.8	10/26	3.9	11/23	4.7		
9/29	3.1	10/28	3.8, 3.9	11/25	4.8		