

Elements of Calculus
MATH 205 Section 1XW, Summer 2016
M,T,W,Th 6 – 7:40pm in NAC 5/108

Instructor: Jhevon Smith

Email: JhevonTeaches@gmail.com

Office Hours: By appointment. Also see tutoring times below.

Website: http://math.sci.ccny.cuny.edu/people?name=Jhevon_Smith

Text: Stewart and Clegg, *Brief Applied Calculus*.

Math Dept.: NAC 8/133 **Math Dept. website:** <http://math.sci.ccny.cuny.edu>

Math 205 website: http://math.sci.ccny.cuny.edu/courses?name=Math_20500

For this class: <http://math.sci.ccny.cuny.edu/pages?name=For+Math+205+1XW+Summer+2016>

Websites: I gave you my website since I will be posting documents and instructions for the class there, such as: review problems, announcements, solutions to tests and quizzes, etc. The webpage for this specific class is also given, as a shortcut. I gave you the math 205 website because you will need to go to that website to access past finals, and other study materials, etc. I gave you the math. dept. website because, well, you should have it.

Calculator: Calculators are *NOT* permitted on any quiz or exam in this course. You may need calculators for certain problems in the homework, but I encourage you to try and do without a calculator as much as possible to create good habits.

Grading: Grades will be assigned according to the following chart.

Letter Grade	G.P.A.	Grade	Letter grade	G.P.A.	Grade
A ⁺	4.00	98-100	C	2.00	74-76
A	4.00	94-97	C-	1.66	70-73
A ⁻	3.66	90-93	D	1.00	60-69
B ⁺	3.33	87-89	F	0	Below 60
B	3.00	84-86			
B-	2.66	80-83			

You need a C to pass this course and move on to the next in the sequence, MATH 209. Depending on your major, you may not have to take MATH 209 and a D may be fine. However, as I see it, why not aim for an A, or an A+ while you're at it.

As department policy demands, the final exam is worth 40% of your grade in this course. The remaining 60% will come from your in-class grade. The breakdown is as follows:

Quizzes: 20% (There will be a quiz *at least* once per week. Two quiz grades will be dropped.)

Written Homework: 5% (I will drop the worst two.)

Participation: 5% (Based mostly on attendance.)

In-class tests: 30% (I will give 4 exams and count the best 3.)

Final Exam: 40% (This will be a cumulative exam given at the end of the course.)

Extra Credit: Not happening...especially in a summer class. Stay on top of your coursework so you won't need it.

Make-up Exams/Quizzes: No way...don't be absent, sick or have an emergency.

Attendance: Attendance will be taken at the beginning of class. You are *late* if you arrive after your name is called. You are considered *absent* if you arrive 15 minutes late. If you are late twice, that is considered as one absence. You will be assigned a WU (failing) grade if you accumulate 5 unexcused absences.

To be excused for an absence (or lateness) you must email me no later than one day after that particular absence (or lateness) with the reason. Of course, proof is required where applicable. For example, if your absence or lateness was due to a doctor's appointment, I expect to see a doctor's note. If you miss a class, it is your responsibility to catch up. You can see me during my office hour to discuss what was done in class, or catch up on your own. It's up to you. **To reiterate, there is no make-up for a missed quiz/homework/exam. Seriously! I drop your lowest scores to make up for the fact that there are no make ups.**

My Expectations:

Work ethic: You are not to slack off (more on this in class)! You are to read ahead! Very Important! Read each section before coming to class. It's better if you have your mind working on the concepts before coming to class—it will be easier for you to keep up, expand your understanding and ask intelligent questions.

Homework: Assigned homework will be collected at the beginning of the class when it's due. We will review each homework in class, so be prepared to discuss your attempts and ask questions. The homework for a section is due once I complete that section in class (whether I announced that I completed it or not. Ask me if you're not sure, or follow along in the text). **Late homework will NOT be accepted.** *The excuse does not matter.* I will drop two homeworks to make up for the fact that late ones cannot be handed in.

I expect your hand-in homework to follow certain guidelines (**you lose points otherwise**):

- (1) Show all your work. This goes for homework and *everything* else you do in this class—besides some quizzes. If anything at all can be written down to show how you got from point A to B, then write it!
- (2) Your homework must be stapled if it consists of more than one page.
- (3) Your homework must be properly labeled: **Your name, the HW number and topic(s)/section number** (see the syllabus for what these are).
- (4) Only ONE HW number per stapled group.
- (5) Be neat! And write legibly, for Pete's sake!

I also expect you to remember the math that you have done before this course. Math is cumulative. Each math class in a sequence builds on the class that came before it. If you are not good at algebra, then precalc will be difficult, if you're not good at algebra and precalc, then calculus I will be difficult, and so on. Be sure you've mastered the level of math that came before this. I will assume you are all experts at the lower level math courses. If this is not currently true for you, make it true, quickly; like by the end of the week.

Now, the matra.

Repeat the following to yourself 10 times a day. Five times when you wake up and five times before you go to sleep.

*I must NOT cancel across sums,
I must NOT distribute powers across sums,
I must NOT divide by zero,
All these are blasphemy!
But I will use brackets when appropriate.*

So yeah, the above may seem like a joke, and it is somewhat, but here's the part that's not funny: **do NOT commit any of the blasphemies mentioned above! Doing so will result in an instant zero (0) on any exam or quiz in which such an offense is made! Regardless of how well you did otherwise.**

There are other offenses that will incur a similar penalty. Making any one of the following mistakes will result in you getting a zero for the problem you make the mistake in.

- 1) Making the mistake of thinking $\int 1/x^n dx = \ln |x^n| + C$ (this is NOT true unless $n = 1!!!$)
- 2) Making the mistake of thinking the derivative (or integral) of a product (or quotient) is just the product (or quotient) of the derivatives (or integrals). That sounded confusing, I'll explain this in class.

Contact: You are to email me at the end of the first day of class, stating your name, your course and its section. I will deduct 5 points off your final grade if you fail to do this. I will be emailing important information from time to time; including progress reports, announcements and advice as needed. Please read the emails. If I email you, it means it is important—important enough for me to take the time to write an email so that you will have it in writing.

Feedback: I encourage you to give me feedback about my teaching or the class, whether positive or negative (just make it constructive please). You can email me or talk to me, or if you don't want to reveal your identity, there is an anonymous feedback page on my website.

Help: FREE tutoring is available in the Marshak Building, room 418S. I am also a tutor there. The hours for this semester are: Mondays through Thursdays 12pm – 5pm. The tutoring center will be open starting Tuesday June 7th. There are also online resources available. A great place to get math help, even at odd hours, is www.mathhelpforum.com. There are a significant number of brilliant people from varying time zones who decide to spend their free time helping others with math. Take advantage of this great service. Another great resource on the web is wolframalpha.com. You can use that site to check your answers. Brilliant site. Of course, there are other online contenders like YouTube, Khan Academy, etc. Check them out. Google is your friend...and big brother. And don't forget your classmates. You should get the contact information of at least one person that you can study with or get missed notes from if you are absent, etc. You're all in this together, help each other out. And, of course, there is always me! Don't be afraid to come to me if you have questions or concerns. You can contact me via email

or see me after class or during my office hour. My office hour is by appointment. I will also be at the tutoring center regularly and you can come and see me there.

Some class rules: Please silence your cell phones and don't use them when in class. Eating in class is NOT allowed. Drinking is permitted, as long as you remove your garbage afterwards.

Academic Integrity: Any act of academic dishonesty will be dealt with by applying the most stringent penalties permitted. Cheating includes, but is not limited to, receiving help during exams and submitting homework without properly acknowledging persons who assisted you. Please read carefully the Policy on Academic Integrity posted on the CUNY website with URL http://www1.cuny.edu/portal_ur/content/2004/policies/image/policy.pdf

I really don't like cheating. Please don't do it. There, I asked nicely.

Summer 2016 Academic Calendar

Extended Session

May	
05/23/2016	Last day to apply for e-Permit
June	
06/03/2016	Commencement
06/05/2016	Last day to drop classes for 100% tuition refund
06/05/2016	Last day of initial registration
06/06/2016	CLASSES BEGIN
06/10/2016	Last day for Change of Program
06/10/2016	Last day for 50% tuition refund
06/10/2016	Last day to add a class to an Existing Program
06/10/2016	Last day to file for Pass/Fail and Audit Options
06/10/2016	Last day to submit request for Independent Study
06/11/2016	Course Withdrawal drop period begins (A grade of "WD" is assigned to students who officially drop a course)
06/11/2016	COA Rosters available in CUNYFirst faculty self-service
06/15/2016	Last day for 25% tuition refund
06/15/2016	Last day to drop classes without the grade of "W"
06/15/2016	Course withdrawal drop period ends (Last day for "WD" grades)
06/15/2016	COA Rosters due in CUNYFirst Faculty self service
06/16/2016	Course withdrawal period begins (A grade of "W" is assigned to students who officially drop a class) –No Refund
06/27/2016	Application for Degree for September 2016 Graduation begins
July	
07/04/2016	College Closed (Independence Day)
07/07/2016	Course withdrawal period ends, last day to drop with the grade of "W"
07/25/2016	LAST DAY OF CLASSES
07/26/2016 – 07/27/2016	Final Exams
07/29/2016	Deadline for filing Application for Degree for September 2016 Graduation
August	
08/02/2016	Last day for grade submissions – Extended Session

Topics and Assignments:

#	Section/Topic	Assignment
1	1.1 Functions and their representations	1 – 7 odd, 11, 21, 23 – 61 odd
2	1.2 Combining and transforming functions	1 – 31 odd, 37, 39 – 53 odd
3	1.3 Linear models and rates of change	1 – 41 odd
4	1.5 Exponential Models	1 – 41 odd, 49
5	1.6 Logarithmic functions	1 – 41 odd, 47
*	Exam #1 on topics 1 – 5	
6	2.1 Measuring change, rates of change	1, 3, 15, 17, 19, 21
7	2.2 Limits	1 – 49 odd
8	2.3 Limit definition of the derivative	1 – 41 odd, 55
9	2.4 The Derivative as a function, higher derivatives	3, 17 – 29 odd, 33, 41, 47
10	3.1 Derivative formulas	1 – 41 odd, 45, 57, 61, 65
11	3.2 Linear approximation and marginal analysis	1 – 23 odd, 29
12	3.3 The Product and Quotient rules	3 – 27 odd, 35, 39, 41
13	3.4 The Chain Rule	1 – 37 odd, 41, 43, 45, 47, 53, 55
14	3.5 Implicit differentiation and logarithmic differentiation	1 – 43 odd, 47
*	Exam #2 on topics 6 – 14	
15	3.6 Exponential Growth and Decay	1 – 19 odd, 23 – 31 odd
16	4.1 Related Rates	1 – 25 odd, 29, 31
17	4.2 Maximum and minimum values	1 – 45 odd, 57
18	4.3/4.4/4.5 Curve sketching	4.3: 1, 5, 15, 25, 35. 4.4: 1 – 31 odd. 4.5: 1 – 13 odd, 21 – 27 odd
19	4.6/4.7 Optimization	4.6: 1 – 17 odd, 23 – 27 odd. 4.7: 1, 3, 5, 9, 15, 17, 37, 39
*	Exam #3 on topics 15 – 19	
20	5.1 The integral; antiderivatives	3, 9, 11, 13, 17, 19, 21 – 27 odd
21	5.2 the Fundamental Theorem of Calculus	1 – 43 odd, 51 – 61 odd, 65, 69
22	5.4 Integration by substitution	1 – 29 odd, 33 – 51 odd
23	6.1 Areas between curves	1 – 19 odd, 27, 29, 31
24	6.2/6.3 Applications of integration	6.2: 1 – 19 odd, 23, 27, 29, 35. 6.3: 1, 3, 7, 9, 11
*	Exam #4 on topics 20 – 24	
*	Final Exam: Wednesday July 27 from 6 – 8:15pm.	In regular classroom

Your real first assignment is to email me, as in the “Contact” instructions above.

Revised for Fall, 2013

COURSE LEARNING OUTCOMES

The student is expected to acquire the skills which are presented in the text and demonstrated by the instructor in class. These skills include the following, with associated departmental learning outcomes(see below):

- | | |
|---|-------------|
| 1 Use limits to calculate derivatives | a,b,e1,e2 |
| 2.Differentiate algebraic, logarithmic and exponential functions | a,b,e1,e2 |
| 3. Solve related rates problems | a,b,c |
| 4. Apply methods of calculus to curve sketching | a, b |
| 5 Solve maximum and minimum problems | a,b,c,e1,e2 |
| 6. Use exponential functions to model growth and decay | a, c |
| 7 Antidifferentiate polynomial, logarithmic and exponential functions | a,b,c,e1,e2 |
| 8 Use calculus to find areas | a,b |

COURSE ASSESSMENT TOOLS

Please describe below all assessment tools that are used in the course.

You may also indicate the percentage that each assessment contributes to the final grade.

1. class work and 2 or 3 in class tests (60%)
2. departmental final exam (40%)

DEPARTMENTAL LEARNING OUTCOMES *(to be filled out by departmental mentor)*

The mathematics department, in its varied courses, aims to teach students to

- a. perform numeric and symbolic computations*
- b. construct and apply symbolic and graphical representations of functions*
- c. model real-life problems mathematically*
- d use technology appropriately to analyze mathematical problems*
- e. state (e1) and apply (e2) mathematical definitions and theorems*
- f. prove fundamental theorems*
- g. construct and present (generally in writing, but, occasionally, orally) a rigorous mathematical argument.*

Course Supervisor: Prof. Ethan Akin

Questionnaire

What is your major? _____

Are you sure you need this class? _____ Think again, are you sure?? _____

What is the highest level of math you *have to* complete for your major? _____

How did you get into this class? (Passed the prerequisite course, placed here upon college entry, placed by an advisor, etc)

Are there any dates during the Summer for which you will not be able to take an exam/quiz due to religious reasons? If so, please state the date(s) and “occasion(s)” below.

How good would you say you are at Algebra? ____ Precalc? _____
(Enter 5 for “I can do it in my sleep!”, 4 for “I’m not the best at it, but pretty awesome.”, 3 for “I’m just OK; I’m good at the basics.”, 2 for “I’m not the worst, but far from the best.”, 1 for “The class was a blur that got more obscure over time!”)

With the same scale as above, rate your overall comfort level with math: _____

Any general feelings or concerns towards this course? (For example, are you: Scared? Excited? Curious? Indifferent? Based on your perceived ability in math, what grade are you expecting? etc)

Are there any other relevant comments that you wish to add?
