

Applied Calculus I
MATH 1203, Spring 2019
Section R05: T,W,F 11:30am – 12:20pm in room JMH 132

Instructor: Jhevon Smith

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Office Hours: T 2:30pm – 4:30pm, F 2:30pm – 3:30pm, or by appointment.

My Website: <https://jhevon.org/teaching>

Text: [Stewart and Clegg, *Brief Applied Calculus*](#).

Math Dept.: JMH 407 **Math Dept. website:** <https://www.fordham.edu/mathematics>

Disclaimer: Consider this syllabus tentative. I do not expect to make changes, but I may have to depending on how the semester goes. I reserve the right to make updates to the syllabus at any point during the semester. However, I promise to inform you of any changes.

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. I gave you the math. dept. website because, well, you should have it.

Calculator: Scientific (non-graphing) calculators are permitted in this course. However, I will tend to author quizzes/tests so that calculators are not absolutely necessary. I encourage you to try and do without a calculator as much as possible to create good habits. You canNOT use your smartphone as a calculator in this course. You also canNOT use a graphing calculator.

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	94-100	C+	2.33	77-79
A ⁻	3.66	90-93	C	2.00	74-76
B ⁺	3.33	87-89	C-	1.66	70-73
B	3.00	84-86	D	1.00	60-69
B-	2.66	80-83	F	0	Below 60

To learn more about these grades and what they mean, refer to

https://www.fordham.edu/info/24145/undergraduate_faculty_handbook/6603/grades/2

The above table is a guide in order to facilitate performance metrics and the use of an electronic grading system. In general, grading will be done on a curve and will incentivize improvement over the course of the semester. The grade breakdown for our class is as follows:

Quizzes: 20% (Quizzes will be done weekly, usually Tuesdays. Lowest two dropped)

Homework: 10% (This will be done online through WebWork. Lowest two dropped)

Participation: 5% (Based mostly on attendance, but I'll notice if you participate further)

In-class tests: 30% (Two non-cumulative tests Expect either a quiz or a test every week)

Final Exam: 35% (This will be a cumulative exam given at the end of the course.)

Make-up Exams: Make-ups for tests will only be given with a documented, compelling reason. There are no make-ups for quizzes and homework.

Attendance: Attendance will be taken at the beginning of class. You are *late* if you arrive after your name is called. You will be assigned a WF (failing) grade if you accumulate 5 unexcused absences or if you stop attending class without officially withdrawing (please don't do this, if you're thinking about it, come talk to me—or at least talk to your dean).

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 hours to discuss what was done in class, or catch up on your own. It's up to you.

Work ethic: You are not to slack off (more on this in class)! You are to read ahead! Very Important! Read about each section before coming to class. Maybe even try some problems or watch some instructional videos. 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 and ask intelligent questions. Start working hard from day 1, don't put yourself in a position where you'll have to catch up. Prevention is better than cure. I expect you to give 110% effort here. Even if you've taken calculus before—no, *especially* if you've taken calculus before. 100% might do if you're great at algebra.

Homework/quizzes/tests:

Homework will be submitted online through WebWork. You must complete all HW when it is due and late HW will not be accepted. If you miss a HW, you will not be allowed to make it up, as two HW grades will be dropped. Please note that due dates are dynamic and may change without notice; so keep checking WebWork to make sure you know exactly when each assignment is due. Roughly speaking, HW for any section will be due within a couple days after the section covered by that HW is done in class. (Oh, here's a weird thing with me: I tend to use the word "couple" literally. Personal quirk.) It's a bad idea to take too long to reinforce ideas.

To access the online homework system:

1. Go to <http://ec2-54-165-17-197.compute-1.amazonaws.com/webwork2/>
2. Click on **MATH1203-Smith-S19** from the Courses list.
3. The username is your Fordham email address username, one word all lowercase.¹ For example, my Fordham email address is jsmith306@fordham.edu, my username would be jsmith306
4. The password is initially your username. You can, and should, change this upon logging in for the first time.
5. You will be logged in to the page that has the list of assignments that are currently active.

Quizzes will be given in class every week (when you don't have a test). In general, they will be short-answer, fill-in-the-blank type questions and you won't get partial credit. You will do your work on your own scrap paper and then write your answers on the sheet provided.

¹ See: <https://www.youtube.com/watch?v=bLE7zsJk4AI>

Tests will also be given in class. Test 1 will be given within the week before midterm grades are due (see the academic calendar), Test 2 will be given around the last day of class. The tests are not cumulative. You must show all your work for tests and you will be given paper/booklets in which to write. In general, partial credit will be given on tests.

The final exam will be cumulative and will be given during finals week. More specific date/time/location to follow. You must also show all your work on the final exam to be assessed for partial credit.

Do not expect a homogeneous learning experience. This will not be the case and it is not good for you anyway. The text, my lectures, homework, quizzes and tests all have their place in helping you learn. Don't expect them to all be the same or cover the same material in the same way with the same level of difficulty. This is an unrealistic and unhelpful expectation.

Prerequisites: 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. The prereqs for this course are college algebra and precalculus. I will assume you are all experts at these lower-level math courses; not much choice here, we have a packed syllabus and we won't have time to go over too much prereq material. If you're not an expert in these courses, become one—quickly; like by the end of the week.

Blasphemies: At this level, certain mistakes will be considered unforgivable and will result in an instant zero in any problem where such mistakes are made (you lose your chance at partial credit). These are:

1. Canceling across sums
2. Distributing powers across sums
3. Dividing by zero
- 4*. While you probably won't be penalized outright for this, please use parentheses when appropriate. If you make a mistake because you were sloppy with parentheses (or notation in general) you will be punished heavily for it.
5. I'll warn you of other really bad mistakes after we learn a bit of calculus.

Contact: When necessary, I will contact you via your college email, so be sure to check your college email address regularly. Please read the emails.

Feedback: I highly 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 see me during my office hours. Talk to me. I'm here to help you learn and succeed.

Help: Besides your online HW platform, there are MANY resources available to help you succeed in this class. Some of these are:

- First, there's me! Come see me during my office hours if you're having any difficulties. Drop by during my office hours or email me to set up an appointment.
- I'll be uploading practice tests with solutions, as well as solutions to tests and answers to quizzes on the webpage for the class (See "My Website" on page 1). Be sure to check these out. The topics list towards the end of this document also has suggested problems for you to attempt from the text. These will not be collected, but it is highly

recommended that you attempt them. You can see me or a tutor if you have issues. Which brings me to the next point.

- Tutoring is available daily in JMH 410—the Math help room. You can receive help from faculty and upper level math majors.
- 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. Symbolab.com is another great site to check your answers. Of course, there are other online contenders like YouTube, Khan Academy, Paul's Online Math Notes, etc. Check them out. Google is your friend...and big brother. A quick Google search can do wonders.
- As of last semester, a former faculty member, professor Quinn Culver, is offering free math help available on his live stream, <https://www.twitch.tv/quinnculver>, which is running Sunday-Thursday from 9pm-midnight EST. If you check him out, be sure to tell him I sent you.
- 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.

Student Disability Services: If you have a disability that may affect your academic performance, please go to the Office of Disability Services as soon as you possibly can. You may be entitled to extra time or other accommodations. Everyone should be given an equal opportunity to do well; be sure to see the office if you believe you may qualify for benefits that will allow you to put your best foot forward. It is a good idea to touch base with them even if you have a disability that you don't think will affect your academic performance. Do this within the first week. For more information, see: https://www.fordham.edu/info/20174/disability_services

Some class rules: Please, no cell phone use in class. Pay attention. Eating in class is NOT allowed. Drinking is permitted, as long as you remove your garbage afterwards. I understand if you need your coffee.

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/quizzes and submitting homework without properly acknowledging persons who assisted you. Ignorance is no excuse here. Please familiarize yourself with these policies by visiting: https://www.fordham.edu/info/22218/essential_resources/3030/academic_integrity_policy

I really don't like cheating; the university doesn't like it either. Please don't do it. There, I asked nicely. Don't make me act on this warning. I will and it's not comfortable for anyone.

Important Dates: Consult the full academic calendar at https://www.web.fordham.edu/info/25396/fordham_college_at_rose_hill_academic_calendar

Monday January 14th - Classes Begin. Yay!

Monday January 21st - Martin Luther King Jr. Day - University Closed

Tuesday January 22nd - Add/Drop Ends; Last Day for Program Change

Friday February 1st - Deadline for Removal of INC/NGR/ABS Grades from Fall 2018

Monday February 18th - President's Day - University Closed

Tuesday February 19th - Classes will follow a Monday Schedule

Thursday February 21st Thursday February 28th - Mid Term Examinations

Thursday March 7th FCRH, FCLC, GSB-UG, PCS - Mid-Semester Evaluations are Due

Monday March 18th to Sunday March 24th - Spring Recess - No Classes

Friday March 29th - Last Day to Withdraw from a course Without Incurring a WF

Thursday April 18th to Monday April 22nd - Easter Recess - University Closed

Thursday May 2nd - Last Day of Classes

Tuesday May 7th Tuesday May 14th - Final Examinations

Topics and Assignments:

#	Section/Topic	Suggested problems from the text
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
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	3.3 The Product and Quotient rules (with chain rule)	3 – 27 odd, 35, 39, 41
12	3.4 The Chain Rule	1 – 37 odd, 41, 43, 45, 47, 53, 55
13	3.5 Implicit differentiation and logarithmic differentiation	1 – 43 odd, 47
*	Exam #1 on topics 1 – 13	Tentatively February 27
14	3.2 Linear approximation and marginal analysis	1 – 23 odd, 29
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 Optimization	1 – 17 odd, 23 – 27 odd.
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	5.5 Integration by parts (time permitting)	3 – 19 odd, 28, 29
*	Exam #2 on topics 14 – 23	Tentatively May 1
*	Final Exam	Tue May 14 @ 1:30pm in our regular classroom. Subject to change by the university.

Anonymous Questionnaire

What is your major? _____

Are you sure you need this class? _____ (think about it again, and answer).

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 semester 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? ____ Calc 1? ____
(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 comfort level with math in general: _____

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?
