



FORDHAM UNIVERSITY

THE JESUIT UNIVERSITY OF NEW YORK

# Calculus I, Fall 2023

Math 1206-R06, CRN 20307

Tue & Fri 2:30 – 3:45 pm, JMH 140

Wed 12:30 – 1:20 pm, JMH 406



This calculus course is intended for science and math majors. Topics include limits; continuity; intermediate value theorem; derivatives; mean value theorem; applications such as curve sketching, optimization, related rates, linear approximation, and differentials; antiderivatives; Riemann sums; definite integrals; the Fundamental Theorem of Calculus; substitution rule; inverse functions and their derivatives; and logarithmic and exponential functions.

4 hours/week, 4 credits.

## Contact Information

Instructor: John Adamski, PhD  
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Office: JMH 418  
Office Phone: 718-817-0427  
Office Hours: Tue & Fri 1-2 pm  
Wed 12:30-2:30 pm  
Recitation Instructor: Dr. Wen Li, [wli198@fordham.edu](mailto:wli198@fordham.edu)

## Communication

All course materials and grades can be found through Blackboard. This includes lecture notes, homework assignments, course documents, etc.

## Textbook

We will closely follow the textbook *Calculus*, 9th Edition, by Stewart, Clegg, and Watson. You are NOT required to purchase a physical copy of the textbook. However, you MUST purchase online access to the eBook and the WeebAssign homework assignments. To do so, please follow the directions below.

1. Login to [Fordham.edu](http://Fordham.edu) and open Blackboard.
2. Open the Blackboard page for this course and click “Math 1206-R06” on the Course Content page.
3. Follow the on-screen instructions. If prompted to choose a purchasing option, select Temporary Access. This will last approximately 14 days, which should be long enough to decide if you want to continue with this course and section. When your temporary access expires, you will need to purchase access for the semester. The cost is approximately \$120.

Here is some good advice: Read the textbook. Of course, this is easier said than done. Math textbooks are not read like novels. You will need to pause to think about what you are reading, check that you know the definitions of the words being used, slow down when reading solutions to example problems, and reread entire paragraphs often. The ability to read and learn from a math textbook is a skill that will be helpful in all of your future math courses, so start practicing now.

My suggestion to you is that before you work on any assigned homework, you first read the corresponding section(s) of the textbook. This will reinforce your understanding of the material from class and will likely make completing the homework much easier and quicker.

## Lectures

During lectures, I will introduce new material including definitions, theorems, proofs, and examples. When time allows, we will work on some problems together. Lectures will be organized to follow sections in the textbook, and you are responsible for knowing both the material covered in lecture and the material in the textbook (there will be significant overlap, but they are not the same). It is up to you whether you read sections of the textbook before or after they are covered in lecture, but you must read them (slowly, carefully, and repeatedly as needed). Lecture notes will be posted to our class Google Drive folder, but you are encouraged to take your own notes. The course instructor is responsible for designing the course, the material introduced, the assigned homework, writing and conducting exams, grading exams, and assigning a grade for the course.

## Recitations

The recitation instructor and I coordinate recitations on a regular basis. The purpose of the recitations is to develop further insight into the material and to enhance your problem

solving skills. The experience will help you with assignments and exams. During recitations, the instructor may solve interesting examples, conduct problem solving activities, answer questions, review some of the key material introduced during a previous lecture, or introduce new material. To take full advantage of the recitations, you should prepare ahead of time some questions.

## Online Homework

As we progress section-by-section through the textbook, online homework will be assigned through WebAssign. On the day that a section is begun in lecture, the corresponding homework assignment will appear on WebAssign. The assignment will be due 1 class after that section is finished in lecture. It is your responsibility to login to WebAssign regularly and complete online assignments on time. However, if you need more time to complete an assignment, you can request a 3-day extension through WebAssign. Extensions will be granted automatically, but the request must be made *before* the assignment's deadline has passed. You can request multiple extensions, but extensions cannot exceed 7 days.

## Written Homework

Written Homework will be distributed in class approximately every two weeks. You will have one week to work on the problems and then I will collect your hand-written solutions in class. It is required that you justify your answers to written homework problems by showing your work. Mathematics is not only about solving problems, but also about being able to explain how the solution was found and why it is correct. Written homework will be graded and returned to you with comments within approximately one week. Late homework and homework submitted via email will not be accepted unless you arrange with me ahead of time for an exception to be made. Homework can always be submitted early to my mailbox in JMH 407.

## Exams

There are two in-class midterm exams and a cumulative final exam. Calculators and notes are not allowed to be used during exams. The tentative dates of these exams are listed below along with links to sample exams and solutions.

Midterm Exam 1	F 10/6
Midterm Exam 2	F 11/17
Final Exam	W 12/13, 1:30-3:30 pm

Make-up exams will only be permitted for excused absences. In order to qualify for a make-up exam, the student must contact the instructor within 24 hours of the absence by email and submit an Excused Absence form through the portal on [Fordham.edu](http://Fordham.edu) by selecting "My Pages" and going to the "Electronic Forms" section.

## Grades

Grades will be posted to Blackboard throughout the semester. At the end of the course, your final grade will be calculated as follows.

- 15% Online Homework Average,  $H$
- 15% Written Homework Average,  $W$
- 20% Midterm Exam 1,  $M_1$
- 20% Midterm Exam 2,  $M_2$
- 30% Final Exam,  $F$

$$\text{Course Grade} = .15H + .15W + .2M_1 + .2M_2 + .3F$$

Course grades will be converted to letter grades according to [Fordham's grading policies](#).

Course Grade	Letter Grade	Quality Description	GPA
$[92.5, \infty)$	A	Excellent; honors-level work, outstanding	4.00
$[89.5, 92.5)$	A-	Still excellent	3.67
$[86.5, 89.5)$	B+	Very good; high level of performance	3.33
$[82.5, 86.5)$	B	Good; solid and above average level	3.00
$[79.5, 82.5)$	B-	Good; still above average	2.67
$[76.5, 79.5)$	C+	Average level of performance	2.33
$[72.5, 76.5)$	C	Satisfactory; acceptable level of performance	2.00
$[69.5, 72.5)$	C-	Minimally acceptable	1.67
$[59.5, 69.5)$	D	Passing, but unsatisfactory; below average performance	1.00
$(-\infty, 59.5)$	F	Failure; inferior performance	0.00

## Time Commitment

It is recommended that you dedicate between 2 and 3 hours each week outside of the classroom per credit for which you are registered. Since our class is a four-credit course, you should be spending between 8 and 12 hours per week preparing and reviewing for this course. These numbers are averages, of course. Some weeks you may spend less time, while other weeks you may spend more time.

## Attendance

I want to help you all succeed in this course. I want you all to help each other succeed in this course. We can't do that if we don't all come to class and participate. So please attend every class. It is both the simplest and most important thing you can do to ensure your successful completion of this course. I will keep attendance records and follow [the university's attendance policy](#) that students may be dropped from the course after more than 4 absences.

## Resources

- You can come to my office hours without making an appointment. Just stop by with your questions. Think of this as free tutoring provided by your professor! You can also make an appointment with me by email to meet at another time, in-person or over Zoom.
- The Math Department operates a Math Help Room at each campus. They are free, and you do not need an appointment. Just drop in anytime they are staffed. The Rose Hill location is JMH 410, and the Lincoln Center location is Lowenstein 810/812. Here is a link to the [Math Help Room schedules](#). Note that even when there are no faculty members around, the Math Help Room remains open for students looking for a good space to study.
- Students looking for additional assistance outside of the classroom are encouraged to consider working with a peer tutor through Knack. Tutors are paid by Fordham – students do not pay. To view available tutors and get started, visit [fordham.joinknack.com](http://fordham.joinknack.com).

## Academic Integrity

From the university's website:

A university, by its nature, strives to foster and recognize originality of thought, which can be recognized only when people produce work that is theirs alone, properly acknowledging information and ideas that are obtained from the work of others. It is therefore important that students must maintain the highest standards with regard to honesty, effort, and performance.

As a Jesuit, Catholic university, Fordham is committed to ensuring that all members of the academic community strive not only for excellence in scholarship but also for integrity of character. In the pursuit of knowledge and personal development, it is imperative that students present their own ideas and insights for evaluation, critique, and eventual reformulation. As part of this process, each student must acknowledge the intellectual contributions of others.

By being enrolled at Fordham University, students are bound to comply with the [University Code of Conduct](#), which includes, but is not limited to the [Standards of Academic Integrity](#).

All portions of the [Undergraduate Academic Integrity Policy](#) will apply to this class. Your work on every evaluation must be your own. Cheating on a homework assignment or quiz will result in a grade of zero on that homework assignment or quiz. Cheating on an exam will result in an F in the course.

## Disabilities

Under the Americans with Disabilities Act, all members of the campus community are entitled to equal access to the programs and activities of Fordham University. If you have (or think that you might have) a disability that may impact your participation in the activities, coursework, or assessment of this course, you may be entitled to accommodations through the Office of Disability Services. You can contact them at [disabilityservices@fordham.edu](mailto:disabilityservices@fordham.edu), 718-817-0655, or by visiting the lower level of O'Hare Hall (Rose Hill campus) or Lowenstein 408 (Lincoln Center campus).

Whether or not you have documentation for accommodations, your success in this class is important to me. If there are aspects of this course that are not accessible to you, please let me know as soon as possible so that we can work together to develop strategies to meet both your needs and the requirements of the course.

## Important Dates

Wed 8/30	First day of classes
Mon 9/4	Labor Day, no classes
Wed 9/6	Classes follow a Monday schedule
Mon 10/9	Columbus Day, no classes
Wed 11/22 – Sun 11/26	Thanksgiving Recess, no classes
Fri 12/8	Last day of classes

## Schedule

The following is a general plan for the course. We may deviate from this schedule, but all such deviations will be announced in class.

Date	Topic
W 08-30	Welcome, 1.4 Tangent and velocity problem
F 09-01	1.5 Limit of a function, 1.6 Calculating limits using limit laws
T 09-05	1.7 The precise definition of a limit, 1.8 Continuity
F 09-08	2.1 Derivatives and rates of change
T 09-12	2.2 The derivative as a function, 2.3 Differentiation formulas
W 09-13	Practice problems
F 09-15	2.4 Derivatives of trig functions
T 09-19	2.5 The chain rule
W 09-20	Practice problems
F 09-22	2.6 Implicit differentiation
T 09-26	2.8 Related rates
W 09-27	Practice problems
F 09-29	2.9 Linear approximations and differentials
T 10-03	3.1 Maximum and minimum values
W 10-04	Review for Exam 1
F 10-06	Exam 1 (Ch 1-2)
T 10-10	3.2 The mean value theorem
W 10-11	Recitation
F 10-13	3.3 How derivatives affect the shape of a graph
T 10-17	3.4 Limits at infinity, horizontal asymptotes
W 10-18	3.5 Summary of Curve Sketching
F 10-20	3.7 Optimization problems
T 10-24	3.9 Antiderivatives
W 10-25	Practice problems
F 10-27	4.1 Areas and distances
T 10-31	4.2 The definite integral
W 11-01	Practice problems
F 11-03	4.3 The fundamental theorem of calculus, 4.4 Indefinite integrals and the net change theorem
T 11-07	4.5 The substitution rule
W 11-08	Practice problems
F 11-10	5.2 Volumes
T 11-14	5.3 Cylindrical shells
W 11-15	Review for Exam 2
F 11-17	Exam 2 (Ch 3-4)
T 11-21	6.1 Inverse functions
T 11-28	6.2* The natural logarithmic function
W 11-29	Practice problems
F 12-01	6.3* The natural exponential function
T 12-05	6.4* General logarithmic and exponential functions
W 12-06	Review for Final Exam
F 12-08	Review for Final Exam
W 12-13	Final Exam 1:30–3:30 pm (all sections listed above)

Note that all classes follow [this final exam schedule](#).