

Math 1 (Fall 2026) Syllabus¹

1 Course Description

Math 1 is an introduction to the fundamental ideas of calculus (the study of functions). We begin by reviewing essential precalculus topics—including graphs, domain and range, composition and inverse functions, and linear, polynomial, rational, trigonometric, and exponential functions. Then, we move to the central concepts of limits, continuity, and derivatives. Students will learn to interpret derivatives and to apply derivatives to graphing, optimization, and related problems.

The course concludes with a first introduction to integration, area under a curve, antiderivatives, and the Fundamental Theorem of Calculus. Throughout the course, the emphasis will be not only on computational skills but also on understanding the core ideas and preparing students for further study in calculus, particularly Math 3.

2 Textbook

The textbook is OpenStax Calculus Volume 1, available for free at:

<https://openstax.org/details/books/calculus-volume-1>.

Note: The Canvas page will be used mostly for announcements and grade entering!

3 People and Times

X-hours might be used on occasion, but these special uses will be announced ahead of time.

- Math 1, Section 1 meets MWF 10:10-11:15 PM at Haldeman 028
X-hours, when they occur, take place Th 12:15-1:05 PM at Haldeman 028
Instructor: Will DeGroot
Email: william.h.degroot.gr@dartmouth.edu
Office: KMNY 216
Office hours: Thursday 1-2:30pm or by request (send and email if none of the above work)
- Math 1, Section 2 meets MWF 11:30-12:35 at KMNY 004
X-hours, when they occur, take place Tuesday 12:15-1:05 PM at KMNY 004
Instructor: Stoyan Dimitrov
Email: stoyan.dimitrov@dartmouth.edu
website: <https://sdimitrov.xyz> Office: KMNY 320
Office hours: Friday 3:30pm-5pm or by request (send and email if none of the above work)
- Math 1, Section 3 meets MWF 12:50-13:55 at KMNY 108
X-hours, when they occur, take place Tuesday 1:20-2:10 PM at KMNY 108
Instructor: Stoyan Dimitrov
Email: stoyan.dimitrov@dartmouth.edu
Office: KMNY 320
Office hours: Friday 3:30pm-5pm or by request (email me if none of the above work)

All sections share tutorial sessions with our TA Conrad Jones (Conrad.G.Jones.III.29@dartmouth.edu). Tutorial sessions are an opportunity for students to drop in and ask questions about material covered in class or on the homework, or just questions about related math.

Tutorial sessions: Tuesday, Thursday, and Sunday from 7pm-9pm. Place: TBD.

¹Last updated: 13/9/2026

4 Grade Components

The course grade will be:

Attendance: 5% [email your instructor in advance, if you will be skipping a class!]

Quizzes: 45% [8 quizzes in total]

Final Exam: 50%

4.1 Quizzes

There will be short weekly quizzes (every Monday, after week 1). Your lowest quiz grade will be dropped.

Make-up quizzes - only if you have told/mailed your instructor 2 days in advance!

4.2 Final Exam

The final exam will be on Friday, November 20, 2026, at 6:30 PM. Place - TBD.

5 Tentative Outline

Date	Topic
M Sept 14	Introduction, preview
W Sept 16	1.1 Functions, graphs, domain and range
F Sept 18	1.1/1.2 Compositions of functions, piecewise functions
M Sept 21	1.2 Linear functions, slope
W Sept 23	1.2 Quadratic functions, polynomials, rational functions
F Sept 25	1.2 Transformations of functions
M Sept 28	1.3 Trigonometric functions
W Sept 30	1.4 Inverse functions
F Oct 2	1.5 Exponential functions
M Oct 5	2.2 Limit of a function
W Oct 7	2.2 Limit laws, examples
F Oct 9	2.3 Limits, squeeze theorem
M Oct 12	More limits
W Oct 14	2.4 Continuity
F Oct 16	2.4 Intermediate value theorem
M Oct 19	3.1 Definition of the derivative
W Oct 21	3.1/3.3 Power rule, Applications of derivative, tangent lines
F Oct 23	3.2 Derivative as function, graphing
M Oct 26	3.5/3.9 Derivative of trigonometric, exponential functions
W Oct 28	3.3 Differentiation rules, product and quotient rules
F Oct 30	3.6 Chain rule
M Nov 2	4.8 L'Hôpital's Rule
W Nov 4	4.3 Maxima and minima w/ 4.7 Optimization
F Nov 6	4.5 Derivatives and Shape of Graph w/ 4.7 Optimization
M Nov 9	cont. & sneak peak at integrals/antiderivatives
W Nov 11	5.1/5.2: area under curve, idea of infinitely many rectangles, definite integral
F Nov 13	5.3 Fundamental theorem of calculus pt. 1, 4.10 antiderivatives
M Nov 16	5.3 Fundamental theorem of calculus
T Nov 20	Final exam 6:30pm

6 Policies, Expectations, & Institutional Resources

6.1 Honor Principle

Plagiarism and cheating in any form (e.g., usage of AI or copying from another person) during the quizzes and the final exam are strongly prohibited and could result in course failure!

6.2 Attendance/engagement classroom expectations?

Please do not have laptops/phones out in class unless they are part of an approved accommodation.

6.3 Accommodations

Students requesting disability-related accommodations and services for this course are required to register with Student Accessibility Services (SAS). If students have questions about whether they are eligible for accommodations or have concerns about the implementation of their accommodations, they should contact the SAS office (student.accessibility.services@dartmouth.edu, 603-646-9900). All inquiries and discussions will remain confidential.

6.4 Title IX

At Dartmouth, we value integrity, responsibility, and respect for the rights and interests of others, all central to our Principles of Community. We are dedicated to establishing and maintaining a safe and inclusive campus where all have equal access to the educational and employment opportunities Dartmouth offers. We strive to promote an environment of sexual respect, safety, and well-being. In its policies and standards, Dartmouth demonstrates unequivocally that sexual assault, gender-based harassment, domestic violence, dating violence, and stalking are not tolerated in our community. The Sexual Respect Website (<https://sexual-respect.dartmouth.edu>) at Dartmouth provides a wealth of information on your rights with regard to sexual respect and resources that are available to all in our community. Should you have any questions, please feel free to contact Dartmouth's Title IX Coordinator. Their contact information can be found on the sexual respect website at: <https://sexual-respect.dartmouth.edu>.

6.5 Mental Health Resources

The academic environment at Dartmouth is challenging, our terms are intensive, and classes are not the only demanding part of your life. There are a number of resources available to you on campus to support your wellness, including your undergraduate dean (<https://students.dartmouth.edu/undergraduate-deans/>), Counseling and Human Development (<https://students.dartmouth.edu/health-service/counseling/about>), and the Student Wellness Center (<https://students.dartmouth.edu/wellness-center/>).

6.6 Religious Observances

Some students may wish to take part in religious observances that occur during this academic term. If you have a religious observance that conflicts with your participation in the course, please meet with your instructor before the end of the second week of the term to discuss appropriate accommodations.