Math 1 (Fall 2025) Syllabus[1]

1 Course Description

Note: the Canvas page is still under construction.

This course reviews background for calculus and then gives a first glimpse of some of the key ideas of calculus. It's intended to lead into Math 3.

The textbook is OpenStax Calculus Volume 1, available for free at:
`https://openstax.org/details/books/calculus-volume-1`.

2 People and Times

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

- Math 001.01 meets MWF 8:50-9:55 PM at KMNY 004.
  X-hours, when they occur, take place Tues 9:05-9:55 PM at KMNY 004.
  Instructor: Will DeGroot
  Email: william.h.degroot.gr@dartmouth.edu
  Office: KMNY 216
  Office hours (subject to change):
  - Mon: 10:30am - 12pm
  - Thurs: 4pm - 5:30pm
  - By request (email me) if none of the above work well
- Math 001.03 meets MWF 10:10-11:15 at Haldeman 028.
  X-hours, when they occur, take place Thurs 12:15-1:05 PM at Haldeman 028.
  Instructor: Foster Tom
  Email: foster.tom@dartmouth.edu
  Office: KMNY 318
  Office hours (subject to change):
  - Tuesday 9:30-11
  - Thursday 9:30-11
- Math 001.04 meets MWF 12:50-1:55 PM at KMNY 004.
  X-hours, when they occur, take place Tues 1:20-2:10 PM at KMNY 004.
  Instructor: David Shuster
  Email: david.j.shuster.gr@dartmouth.edu
  Office: KMNY 243
  Office hours (subject to change):
  - Mon: 2 - 3 PM
  - Tues: 1 - 2 PM
  - Thurs: 12 - 1 PM
  - By request (email me) if none of the above work well

[1] Last updated: 11/2/2025, revisions to tentative outline and quiz lowest-grade drop policy

All sections share tutorial sessions with our TA Aidan Hennessey. 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 are held thrice weekly on Tuesday from 7-9 PM, Thursday from 7-9 PM, and Monday from 5:30-7:30 PM. All tutorials are held in KMNY 004.

See below for exam date.

3 Grade Components

The course grade will be:

Written Homework: 35%
WebWork: 15%
Quizzes: 25%
Final Exam: 25%

On all assignments except WebWork, please show your work.

3.1 Homeworks

Except Homework 0, written homeworks will be due weekly on **Mondays** and must be submitted on Gradescope. To access this course's Gradescope page, sign in with your Dartmouth credentials, click "Add a course," and then use entry code 3X3E7D.

You can submit homework reflections by the Monday after you receive feedback in order to gain back half the points you missed. These involve, for each problem, explaining where you went wrong on your homework and how to do it correctly. These can then be submitted to Gradescope as above.

WebWork will be due weekly on Wednesdays and can be accessed through the link on Canvas.

Homework submitted late will have 20% deducted per late day. If an extension is likely to be needed, please request multiple days before and make sure you have received approval before the assignment deadline.

3.2 Quizzes

There will be short weekly quizzes. Your lowest 2 quiz grades will be dropped.

3.3 Final Exam

The final exam will be on November 25, 2025, at 3 PM in the Life Sciences Center, Room 200.

4 Tentative Outline

Date	Topic	Homework/Exams
M Sept 15	Introduction, preview	
W Sept 17	1.1 Functions, graphs, domain and range	Written HW 0 due
F Sept 19	1.1/1.2 Compositions of functions, piecewise functions	
M Sept 22	1.2 Linear functions, slope	Written HW 1
W Sept 24	1.2 Quadratic functions, polynomials, rational functions	Webwork 1
F Sept 26	1.2 Transformations of functions	Quiz 1
M Sept 29	1.3 Trigonometric functions	Written HW2
W Oct 1	1.4 Inverse functions	Webwork 2
F Oct 3	1.5 Exponential functions	Quiz 2
M Oct 6	2.2 Limit of a function	Written HW 3
W Oct 8	2.2 Limit laws, examples	Webwork 3
F Oct 10	2.3 Limits, squeeze theorem	Quiz 3
M Oct 13	More limits	Written HW 4
W Oct 15	2.4 Continuity	Webwork 4
F Oct 17	2.4 Intermediate value theorem	Quiz 4
M Oct 20	3.1 Definition of the derivative	Written HW 5
W Oct 22	3.1/3.3 Power rule, Applications of derivative, tangent lines	Webwork 5
F Oct 24	3.2 Derivative as function, graphing	Quiz 5
M Oct 27	3.5/3.9 Derivative of trigonometric, exponential functions	Written HW6
W Oct 29	3.3 Differentiation rules, product and quotient rules	Webwork 6
F Oct 31	3.6 Chain rule	Quiz 6
M Nov 3	4.8 L'Hôpital's Rule	
W Nov 5	4.3 Maxima and minima w/ 4.7 Optimization	Written HW 7, Webwork 7
F Nov 7	4.5 Derivatives and Shape of Graph w/ 4.7 Optimization	Quiz 7
M Nov 10	cont. & sneak peak at integrals/antiderivatives	Written HW 15,16
W Nov 12	5.1/5.2: area under curve, idea of infinitely many rectangles, definite integral	Webwork 8
F Nov 14	5.3 Fundamental theorem of calculus pt. 1, 4.10 antiderivatives	Quiz 8
M Nov 17	5.3 Fundamental theorem of calculus	Last day of classes
T Nov 25	Final exam 3pm	

5 Policies, Expectations, & Institutional Resources

5.1 Honor Principle

Collaboration on homework is encouraged, but in the case of written work, you must list their collaborators at the top of your homework. Also, all work and answers must be your own words and ideas. In particular, you should not simply copy answers from other people.

AI use is not recommended. Regardless of AI use, all work and answers must be your own words and ideas. In particular, you should not simply copy answers from AI or other sources.

5.2 Any attendance/engagement classroom expectations?

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

5.3 Accommodations

Students requesting disability-related accommodations and services for this course are required to register with Student Accessibility Services (SAS) (get started at https://students.dartmouth. edu/student-

accessibility/students/where-start) and request that an accommodation email be sent to their instructor in advance of the need for an accommodation. Then, students should schedule a follow-up meeting with their instructor to determine relevant details such as what role SAS or its Testing Center may play in accommodation implementation. This process works best for everyone when completed as early in the quarter as possible. 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.

5.4 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. Please note that, as a faculty member, I am obligated to share disclosures regarding conduct under Title IX with Dartmouth's Title IX Coordinator. Confidential resources are also available, and include licensed medical or counseling professionals (e.g., a licensed psychologist), staff members of organizations recognized as rape crisis centers under state law (such as WISE), and ordained clergy (see https://dartgo.org/titleixresources). 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.

5.5 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/).

5.6 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.