Course Syllabus

Jump to Today Edit

University of New Hampshire: Department of Mathematics

Calculus I

MATH 425 - Summer 2025

Course Prerequisites

Completing MATH 418 (Precalculus) with a grade of C or better or qualifying with the placement test. (Not offered for credit if credit received for MATH 424.)

Note: Any student that does not meet this prerequisite will be dropped from the class.

Course Description

Calculus of one variable covering limits; derivatives of algebraic, trigonometric, exponential, and logarithmic functions; applications include curve sketching, max-min problems, related rates and area problems.

Textbook

In this class we will be using a free online textbook titled "Calculus: Volume I" that is licensed under a Creative Commons Attribution 4.0 International License. You may acquire either a PDF file of the textbook by downloading it from **here (https://openstax.org/details/books/calculus-volume-1)** or if you would prefer a physical copy of the textbook you may purchase one from **amazon. (https://www.amazon.com/dp/193816802X/ref=as_li_ss_tl?ie=UTF8&linkCode=sl1&tag=openstax00-20&linkId=65e6c04f56a7d75c4d4e21f6bd2894c6&language=en_US)**

Course Format/Method of Instruction

This is a 100% online course that will begin May 19, 2025 and end on July 25, 2025. All content for the course will be delivered online through a series of modules in which you will read texts, watch a series of short video lectures, complete online homework, skill checks, and proctored exams.

Assignments and Grading

Your final grade will be computed as follows:

- Homework Average: 25%
- Skill Checks: 25%
- Midterm Exam: 25%
- Final Exam: 25%

Important Note: Grades are determined only by the points earned from the assignments listed above that are given during the semester. There is no opportunity other than what is explicitly stated in this syllabus to earn extra points. That is, no special assignments, nor additional work can be assigned to help improve your grade.

Homework

- **Assignment Frequency:** Homework will be assigned for each section we cover.
- **Scoring and Credit:** To receive credit for a homework assignment, you must achieve a score of 50% or higher. Achieving this minimum score will result in your grade being manually adjusted to 100%. It may take up to a week for this adjustment to be reflected in your grade. While it's not necessary to score 100% on each assignment to receive full credit, I strongly encourage you to attempt every problem. This practice is crucial for your success in this class.
- **Due Dates:** Each homework assignment is due by the end of the week (Friday 11:59pm) in which the relevant material is taught.
- **Grade Adjustment:** Your lowest two homework scores will be dropped from your overall homework average.

Skill Checks

- **Assignment Frequency:** There will be four skill check assignments throughout the semester. These assignments will include questions similar to those in the homework and will require you to show all your work.
- **Submission:** After completing an assignment, photograph or scan your work as a .png, .jpeg, or single .pdf (preferred). and submit it via MyCourses. **Important Note:** .HEIC files are not acceptable for submission. Please make sure your work is in focus and clearly visible for full credit.
- **Timing and Due Dates:** As is the case with the homework, you can complete the skill checks according to your own schedule, but they must be submitted by the end of the week (Friday 11:59pm) in which they are assigned.

Exams

Although this is an asynchronous course, to maintain academic integrity, exams will be administered through **live proctored Microsoft Teams sessions**. Each exam will have **four available time slots** spread across two days. You will be required to sign up for a time slot for each exam at the beginning of the semester, and you must take the exam during your selected time.

Please make sure now that you are available for at least one of the listed slots below. If you anticipate any issues, address them immediately. It is strongly recommended that you avoid selecting the final time slot for

each exam in case any unforeseen problems or technical issues arise.

Midterm Exam:

- **Wednesday, June 18**
  - Morning Session: 9:00 AM – 11:15 AM
  - Evening Session: 6:00 PM – 8:15 PM
- **Thursday, June 19**
  - Morning Session: 9:00 AM – 11:15 AM
  - Evening Session: 6:00 PM – 8:15 PM

Final Exam:

- **Wednesday, July 23**
  - Morning Session: 9:00 AM – 11:15 AM
  - Evening Session: 6:00 PM – 8:15 PM
- **Thursday, July 24**
  - Morning Session: 9:00 AM – 11:15 AM
  - Evening Session: 6:00 PM – 8:15 PM

During your session, you must have your camera on with your face, hands, and workspace clearly visible. You will not be able to see or interact with other students.

Additional Tips for Exam Days:

1. **Reliable Internet Connection:** Ensure you have a stable internet connection to avoid any connectivity issues during the exam. If you are disconnected during the exam please try to log back into Microsoft Teams as soon as possible.
2. **Clear Work Area:** Keep your desk or workspace clear of all materials except for the exam or scrap paper. You may choose to print the exam if you would like or work from a digital version on your computer. Completing the exam on a printed copy is preferred but not necessary.
3. **Check Your Equipment:** Test your camera and microphone beforehand to avoid technical issues.
4. **Avoid Interruptions:** Inform others in your household of your exam schedule to prevent disturbances.
5. **Stay in Frame:** Remain visible in your camera frame throughout the exam.
6. **Follow Online Etiquette:** Mute your microphone when not speaking and avoid any background noise.

By following these guidelines, we can maintain a secure and effective examination environment for everyone.

Makeups:

If you have a valid reason for missing a scheduled exam session, please notify me as soon as possible, preferably **before** your selected exam time. Makeups will be considered only for genuine emergencies (such as illness on the day of the exam or a death in the immediate family), and only with appropriate documentation. Because exam slots are limited and must be scheduled in advance, you are expected to plan ahead and select a time you can commit to.

There will be no extensions for online homework or skill checks, as you have the entire week to complete those assignments.

Students with Disabilities: The University is committed to providing students with documented disabilities equal access to all university programs and facilities. If you think you have a disability requiring accommodations, you must register with the disability services coordinator. They can be contacted by phone at 603.641.4383, or in person in the academic counseling office. Please be aware that I cannot make any accommodations prior to you meeting with disability services.

Technology and Software Requirements

We will be making use of a freely available online graphing calculator called **demos (https://www.desmos.com/calculator)** .

Academic Conduct

Please review the Universities standards on academic honesty **here (https://www.unh.edu/student-life/academic-honesty-policy)** .

Course Summary:

Date	Details	Due
Fri May 23, 2025	**Exam Time Slot Selection (Midterm and Final) (https://mycourses.unh.edu/courses/135983/assignments/1310574)**	due by 11:59pm
	EXERCISES 2.2 The Limit of a Function (https://mycourses.unh.edu/courses/135983/assignments/1308781)	due by 11:59pm
	EXERCISES 2.3 The Limit Laws (https://mycourses.unh.edu/courses/135983/assignments/1308782)	due by 11:59pm

Date	Details	Due
	EXERCISES 2.4 Continuity (https://mycourses.unh.edu/courses/135983/assignments/1308783)	due by 11:59pm
	Introduction to Submitting Answers Online (https://mycourses.unh.edu/courses/135983/assignments/1308807)	due by 11:59pm
Fri May 30, 2025	EXERCISES 3.1 Defining the Derivative (https://mycourses.unh.edu/courses/135983/assignments/1308784)	due by 11:59pm
	EXERCISES 3.2 The Derivative as a Function (https://mycourses.unh.edu/courses/135983/assignments/1308785)	due by 11:59pm
	EXERCSIES 3.3 Differentiation Rules (https://mycourses.unh.edu/courses/135983/assignments/1308803)	due by 11:59pm
	Skill Check 1 (https://mycourses.unh.edu/courses/135983/assignments/1308808)	due by 11:59pm
Fri Jun 6, 2025	EXERCISES 3.5 Derivatives of Trigonometric Functions (https://mycourses.unh.edu/courses/135983/assignments/1308786)	due by 11:59pm
	EXERCISES 3.6 The Chain Rule (https://mycourses.unh.edu/courses/135983/assignments/1308787)	due by 11:59pm
	EXERCISES 3.7 Derivatives of Inverse Functions (https://mycourses.unh.edu/courses/135983/assignments/1308788)	due by 11:59pm

Date	Details	Due
Fri Jun 13, 2025	EXERCISES 3.8 Implicit Differentiation (https://mycourses.unh.edu/courses/135983/assignments/1308789)	due by 11:59pm
	EXERCISES 3.9 Derivatives of Exponential and Logarithmic Functions (https://mycourses.unh.edu/courses/135983/assignments/1308790)	due by 11:59pm
	EXERCISES 4.1 Related Rates (https://mycourses.unh.edu/courses/135983/assignments/1308791)	due by 11:59pm
	Skill Check 2 (https://mycourses.unh.edu/courses/135983/assignments/1308809)	due by 11:59pm
Fri Jun 27, 2025	EXERCISES 4.3 Maxima and Minima (https://mycourses.unh.edu/courses/135983/assignments/1308793)	due by 11:59pm
	EXERCISES 4.4 The Mean Value Theorem (https://mycourses.unh.edu/courses/135983/assignments/1308794)	due by 11:59pm
	EXERCISES 4.5 Derivatives and the Shape of a Graph (https://mycourses.unh.edu/courses/135983/assignments/1308795)	due by 11:59pm
Fri Jul 4, 2025	EXERCISES 4.6 Limits at Infinity and Asymptotes (https://mycourses.unh.edu/courses/135983/assignments/1308796)	due by 11:59pm
	EXERCISES 4.8 L'Hôpital's Rule (https://mycourses.unh.edu/courses/135983/assignments/1308798)	due by 11:59pm
	Skill Check 3 (https://mycourses.unh.edu/courses/135983/assignments/1308811)	due by 11:59pm

Date	Details	Due
Fri Jul 11, 2025	**EXERCISES 4.10 Antiderivatives** (https://mycourses.unh.edu/courses/135983/assignments/1308792)	due by 11:59pm
	EXERCISES 4.7 Applied Optimization Problems (https://mycourses.unh.edu/courses/135983/assignments/1308797)	due by 11:59pm
	EXERCISES 5.1 Approximating Areas (https://mycourses.unh.edu/courses/135983/assignments/1308799)	due by 11:59pm
Fri Jul 18, 2025	**EXERCISES 5.2 The Definite Integral** (https://mycourses.unh.edu/courses/135983/assignments/1308800)	due by 11:59pm
	EXERCISES 5.3 The Fundamental Theorem of Calculus (https://mycourses.unh.edu/courses/135983/assignments/1308801)	due by 11:59pm
	EXERCISES 5.5 Substitution (https://mycourses.unh.edu/courses/135983/assignments/1308802)	due by 11:59pm
	Skill Check 4 (https://mycourses.unh.edu/courses/135983/assignments/1308812)	due by 11:59pm
	Final Exam: Submit Your Work (https://mycourses.unh.edu/courses/135983/assignments/1308806)	
	Midterm Exam: Submit Your Work (https://mycourses.unh.edu/courses/135983/assignments/1308804)	