

Calculus III

MATH 15300 – Section 14 – Winter 2020

Instructor	Alan Chang Eckhart 135 alanchang@uchicago.edu (For course questions, use Piazza!)
Lecture	Tu/Th 8:00am – 9:20am in Eckhart 202
Problem Session	W 5:00pm – 6:00pm in Eckhart 308
Office Hours	M 1:00pm – 2:00pm F 10:15am – 11:15am
Course Assistant	Eric Hon Office hours: M 6:00pm – 7:00pm, at the Regenstein A-Level
Textbook	Salas, Hille, Etgen. <i>Calculus: One and Several Variables, 10th ed.</i>
Grading System	Homework 20% Midterm 1 25% Midterm 2 25% Final Exam 30%

Course description

From the math department:

“Math 150s is the standard three-quarter sequence in Calculus. It is intended for students going into all disciplines, including the physical sciences, the biological sciences, and the social sciences, and also including well-prepared students looking to satisfy the College’s Core requirement in the mathematical sciences. The course covers both theoretical and computational aspects of Calculus. In particular, students should be able to state and understand important definitions and theorems, though with a few important exceptions, students should not be expected to produce proofs, either on homework or exams.”

“The third quarter course, Math 15300, covers sequences and series of real numbers. In particular, students are expected to understand and to use the ϵ, N definition to prove of the existence of the limit of a sequence. The course does also cover the elements of multivariable calculus, including functions of several variables, their partial derivatives, and double and triple integrals in rectangular coordinates.”

Course website/Piazza

We will be using Piazza for class discussion. Please create an account on the website and add yourself to our class. You can access it through Canvas or directly at piazza.com. The system is highly catered to getting you help fast and efficiently from classmates and myself. Rather than emailing questions to me, I encourage you to post your questions on Piazza.

Homework

Homework will be posted on Piazza and due every Thursday at 5pm, in my mailbox in the basement of Eckhart Hall. **There will be new homework problems added after each lecture.** I will not accept homework via email. If you need an extension, ask me before the due date. I expect that this will happen very rarely. Late homework will not be graded unless you have been granted an extension. Your homework will be graded by a course assistant, whose work I will review regularly. You can work together to solve problems, but you should write down a clean copy of your solutions by yourself.

Midterms and final exam

The tests will cover material from class and homework. Neither notes nor books will be allowed during the tests.

The midterms are scheduled for:

- **Tuesday, January 28** (week 4)
- **Thursday, February 20** (week 7)

Making up a midterm for credit is not allowed except in the most extreme circumstances, preferably having notified me in advance and provided me with signed documentation (e.g., a doctor's note).

The University Registrar has scheduled our final exam to take place **Thursday, March 19, 8:00am–10:00am**. Please read the following message carefully.

It is the policy of the Department of Mathematics that the following rules apply to final exams in all undergraduate mathematics courses:

1. The final exam must occur at the time and place designated on the College Final Exam Schedule. In particular, no final examinations may be given during the tenth week of the quarter, except in the case of graduating seniors.
2. Instructors are not permitted to excuse students from the scheduled time of the final exam except in the cases of an Incomplete, or a graduating senior.

Letter Grades

There is no predetermined distribution of letter grades (e.g., *there will be this many A's*), and no predetermined correspondence between scores and letter grades (e.g., *A is this range of scores*). I will decide at the end of the quarter how your scores translate into letter grades, taking into account factors such as the difficulty of the exams, and overall class performance. If you have any questions about how you are doing in the course, I would be happy to discuss them in office hours or by appointment.

List of topics

- **Chapter 11: Sequences; Indeterminate Forms; Improper Integrals:** sections 11.1–11.4, 11.5 (l'Hôpital only) and 11.7.
- **Chapter 12: Infinite Series:** sections 12.1–12.3 and 12.5.
- **Chapter 13: Vectors in Three Dimensional Space:** sections 13.1–13.3. From 13.5 and 13.6, cover the scalar equations of lines and planes, not the vector equations. (No cross-products or determinants.)
- **Chapter 15: Functions of Several Variables:** sections 15.1, 15.3, 15.4, and 15.6 (equality of mixed partials for C^2 functions only).
- **Chapter 16: Gradients; Extreme Values; Differentials:** sections 16.1–16.4.
- **Chapter 17: Double and Triple Integrals:** sections 17.1–17.3 and 17.6.

Special Circumstances

Please contact me so the appropriate arrangements can be made

- if you require accommodations for a disability,
- if you are taking this course in order to finish an Incomplete, or
- if you will be graduating at the end of this quarter.

Note: The policies outlined above are subject to reasonable change at my discretion. In the event of a change, I will give written or verbal notice.