NYU Calculus III SYLLABUS Autumn 2025

Quick Reference

Textbook

Essential Calculus: Early Transcendentals, 2nd edition by James Stewart

Technology

- Brightspace - site to course materials
- Gradescope – written homework, PreLectures, & weekly quizzes
- WebAssign – access from Brightspace, online HW system
- Ed Discussion – discussion board, announcements

Grades

Assessment Weights

- WebAssign HW: 10%
- Written HW: 10%
- PreLectures: 5%
- Weekly Quizzes: 10%
- Midterm Exams: 40%
- Final Exam: 25%

- Grades follow components above, **there is no extra credit for the course.**

Dropped Scores – free spins

- Drop 5 lowest WebAssign HW
- Drop 4 lowest PreLecture Quiz
- Drop 2 lowest Post-Lecture Quiz
- Drop 2 lowest written HW

Late or Missed Assessments

- No extension for Written HW or Quizzes, use free spin wisely
- WebAssign: one 24-hour extension per assignment.
- Exams: Make up exams only in extreme situations. Contact the instructor as soon as possible

Course Information

Textbook

Stewart, J. **Essential Calculus: Early Transcendentals**. 2nd Edition w/ WebAssign.

WebAssign License

You will have a two-week grace period from the beginning of the term to purchase and activate a WebAssign license. Licenses can be purchased in one of the following ways:

- through the **NYU Follett ACCESS program**
- as part of a textbook bundle at the **NYU bookstore**,
- online through WebAssign;

Follett Access Details

This course is participating in the Follet Access program. This is an NYU Bookstore initiative that delivers required course materials at the lowest possible price.

The book, Calculus by Stewart will be delivered to you digitally through the WebAssign platform. The **cost of the book is $24.25**, which will be added as a "book charge" to your bursar bill, this is a savings of $11 over the publisher's list price.

All students are automatically enrolled in the Follett Access program. If you decide not to use this digital edition you can opt-out of the program. **The deadline for opting out is September 17th.** You must **login here to the student portal**. If you have any questions, contact the bookstore at (212) 998-4656 or **wsq.text@nyu.edu**.

INFORMATION YOU SHOULD KNOW:

- Your username is your school email address.
- The deadline to opt out is September 17th.
- If you have opted out of a course, you can opt back in.

Topics (in order)

1. Sec 10.1: Three-Dimensional Coordinate Systems
2. Sec 10.2: Vectors
3. Sec 10.3: The Product Rule
4. Sec 10.4: The Cross Product
5. Sec 10.5: Equations of Lines and Planes
6. Sec 10.6: Cylinders and Quadric Surfaces
7. Sec 10.7: Vector Functions and Space Curves
8. Sec 10.8: Arc Length and Curvature
9. Sec 10.9
10. Sec 11.1: Functions of Several Variables
11. Sec 11.2: Limits and Continuity
12. Sec 11.3: Partial Derivatives
13. Sec 11.4: Tangent Planes and Linear Approximations
14. Sec 11.5: The Chain Rule
15. Sec 11.6: Directional Derivatives and the Gradient
16. Sec 11.7: Maximum and Minimum Values
17. Sec 11.8: Lagrange Multipliers
18. Sec 12.1: Double Integrals over Rectangles
19. Sec 12.2: Double Integrals over General Regions
20. Sec 12.3: Integration in Polar Coordinates
21. Sec 12.5: Triple Integrals
22. Sec 12.6: Triple Integrals in Cylindrical Coordinates
23. Sec 12.7: Triple Integrals in Spherical Coordinates
24. Sec 13.1: Vector Fields

25. Sec 13.2: Line Integrals
26. Sec 13.3: The Fundamental Theorem of Line Integrals
27. Sec 13.4: Green's Theorem
28. Sec 13.5: Curl and Divergence
29. Sec 13.6: Parametrizations of Surfaces and Their Areas
30. Sec 13.7: Surface Integrals
31. Sec 13.8: Stokes' Theorem
32. Sec 13.9: Divergence Theorem

Schedule:

Topic	Date	Topic	Date
10.1, 10.2	09/03	12.1	10/22
10.3, 10.4	09/08	12.2	10/27
10.5	09/10	12.3	10/29
10.6	09/15	12.5	11/03
10.7, 10.8	09/17	12.6, 12.7	11/05
10.9	09/22	13.1, 13.2	11/10
11.1, 11.2	09/24	13.3	11/12
11.3	09/29	Midterm 2	11/17
11.4	10/01	13.4	11/19
11.5	10/06	13.5	11/24
11.6	10/08	13.6	12/01
11.7	10/14	13.7	12/03
Midterm	10/15	13.8	12/08
11.8	10/20	13.9	12/10

Course Structure

1. Watch PreLecture videos before class meetings. Spend time on these videos, pause frequently to try the examples on your own.
2. After the videos, complete the practice problem set at the end of each video.
3. Then complete the PreLecture quiz on Gradescope. **Steps 1-3 must be completed before class meetings at 8:00 am.**
4. If you have time, try a few WebAssign problems to continue practicing.
5. Attend class meetings prepared to start working on more examples that are slightly more difficult.
6. If you still have some WebAssign problems left, this is the time to complete them all.
7. Then complete the Written HW, which is meant to be conceptually more challenging. **It is highly recommended that you complete the Written HW after you have completed all the exercises in the WebAssign HW.**
8. Review the solutions to prepare for the quiz, in addition to all the examples done in PreLecture and Lecture.
9. Then we repeat.

Note: During asynchronous learning (Steps 1-4), you are encouraged to ask questions and seek hints via ed Discussion. Please take advantage of this resource.

Course Work

WebAssign HW (10%)

- WA homework assignments are **due Mondays at 11:59pm ET**
- It consists of all topics covered that week.
- **Please do not wait till the last minute to do each assignment; plan ahead of time.**
- You can request an extension of 24 hours on these assignments through WebAssign, so there is no need to request them from the professor.
- Five of your lowest grades will be dropped.
- **Access**: only use the link provided on Brightspace on the left.
- **Attempts**:
    - You can work in any order and for as long as you like until the due date.
    - There are 5 attempts for each free response, 3 attempts for each multiple choice, and 1 attempt for each two-choice question.
- **Technical Issues**:
    - Contact WebAssign directly, or come to office hours to troubleshoot.

Written Homework (10%)

- Question sets will be assigned **every week**.
- For full credit on written homework, your answers must be explained and justified, sometimes in complete English (and mathematical) sentences.
    - You may lose points for unexplained or poorly presented answers.
    - Feel free to work on homework in groups, but try the questions yourself first. Put the write-up into your own words. **Do not copy others' work**.
    - Please refer to the Academic Integrity specified by the university and CAS (**https://cas.nyu.edu/content/nyu-as/cas/academic-integrity.html**)

- They are due on **Thursdays at 11:59 p.m. via Gradescope**, unless otherwise specified.
- **Late and emailed homework will not be accepted.**
- Two of your lowest homework grades will be dropped.

Weekly Quizzes (15%)

Pre-Lecture Online Quizzes (5%)

- You are required to watch videos before each lecture.
- These videos are brief introductions to the topics of each class.
- Then there is a mini-quiz to assess what you have watched, via Gradescope, with a combination of questions graded by completeness and correctness.
- Both the pre-lecture videos and the questions must be done before each lecture.

Post-Lecture In-person Quizzes (10%)

- Post-Lecture Quizzes will take place every week during recitation.
- Quizzes are timed for 20 minutes; no resources are allowed during the quiz.
- The topics for each quiz are typically the material covered the week before.

Exams (65%)

There will be **two midterm exams (40%)**:

- **(20%) Wednesday, Oct 15 2025 in class**
- **(20%) Monday, Nov 17 2025 in class**

and **one final exam (25%)** that is *cumulative*: **Monday, Dec 15 2025 at 12:00 p.m. -- 1:50 p.m. , Location TBD**

Please mark your calendar, as these dates will not change, and make your travel plans accordingly. **Travel is NOT an excuse to miss any exam.**

Exams will be conducted in person, no exceptions.

Exams will contain a mixture of computational and conceptual problems. Some of them will resemble homework problems, while some will be brand new to you. The exams will be a mixture of multiple choice and free response problems.

Course Grade

The items above will be averaged with the following weights:

WebAssign HW	10%
Written HW	10%
PreLectures	5%
Weekly Quizzes	10%
Midterm Exam	40%
Final Exam	25%

Letter Grades

We will convert course grades to letters based on departmental scales:

Grade	A	A-	B+	B	B-	C+	C	D	F
Range	[100,93]	(93,90]	(90,87]	(87,83]	(83,80]	(80,75]	(75,65]	(65,50]	<50

How to succeed in this course

- **Come to class prepared.**
    - Watch pre-lecture videos and complete the pre-lecture practice set and quiz every day.
- **Get your hands dirty in class!**
    - Work on practice questions in class.
    - Participate when we problem-solve together.
- **Start practicing immediately after each lecture.**
    - Start working on the WebAssign.
    - These questions are typically remedial in nature and similar to examples worked in class.
    - The purpose of WebAssign is to be a formative assessment and to allow students to get immediate feedback on their work and procedure.
    - Do not “go through the motion”. **Strive to understand the concept and procedure.**
- **Do not spend time rewriting lecture notes and/or rewatching pre-lecture and lecture videos.**
    - The amount of time required to redo your notes compared to the amount of learning involved is not beneficial.
    - Instead, outline the key takeaways from each lecture accompanied with 1-2 examples and important “patterns”.
    - Keep adding to this brief outline as you do more practice.
- **Spend time on all written assignments.**
    - Expect each written assignment to take approximately 8-12 hours.
    - These questions typically involve critical thinking and allow students to use the concepts in situations they haven’t encountered.
    - This is your opportunity to wrestle with and to internalize new ideas introduced in class.
    - When working on assignments, **strive to really understand the deeper ideas**.
- **Prepare for quizzes**.
    - for example, by doing more practice, in order to help identify the concepts that you need to understand more deeply.
- **More Practice**:
    - Try similar WebAssign questions under Personal Study Plan. You can attempt the "quizzes" in the Personal Study Plan as many times as you like and it will not affect your grade.
    - Complete the exercises on each worksheet.

Get help early:

- Attend instructor's office hours. You do not need an appointment to stop by during regularly scheduled office hours. If you need additional office hours, you can email me to make an appointment.
- Discussion Board: Use ed Discussion to post questions and to respond to classmates' questions. When you do, make sure to be courteous and respectful. For homework-related questions, full solutions to homework problems should not be requested or provided.
- Form study groups, but it's critical that you *write up your own homework individually*.
- Free Tutoring:
  - **Courant tutoring center** (**https://math.nyu.edu/dynamic/undergrad/tutoring/**)
  - **the University Learning Center** (**https://www.nyu.edu/students/academic-services/undergraduate-advisement/academic-resource-center/tutoring-and-learning.html)**

We hope you enjoy this class! **Please read the course policy below for more information**.

Course Policies

Linked here are mostly minor and technical rules and policies that will not seem necessary at the beginning of the course. I do not like to dwell on them because they distract from my goal and yours, which is engaging in the course material as soon and as much as possible. However, you should read them and we will abide by them. Some of this may sound a little snarky, and I apologize in advance for that, but all of these issues happen enough that I needed to write them down in a document.