V63.0123-5: Calculus III
Course Syllabus

Instructor:	Samuel Walsh (Email: `samuelwalsh@nyu.edu`)
Textbook:	J. STEWART, *Essential Calculus, Early Transcendentals* Brooks Cole, ISBN: 978-0495014287
Lectures:	TR 11:00 AM -12:50 PM

Goals and Topics. Welcome to Calc III! In this course we will take the concepts of single-variable calculus (Calc I and II) and look at their generalizations to functions of two or three variables.

Class Meetings. The course meets TR for from 11:00AM–12:50PM.

Homework. There are two media for homework in Calculus III. There will be weekly online assignments administered through WebAssign (This is why a WebAssign software license is one of the required course materials), WebAssign problems are computational in nature and assess the techniques introduced in class. Many of these problems will resemble examples in the textbook or from class. You will get immediate feedback on your progress and will get several chances to ensure it.

There will also be problems to write up on paper each week and turn in. These problems will require more than just procedure, might connect two more more things together, and will more closely resemble the harder exam problems.

One of the major goals of college-level mathematics education is to move students from computational processes to conceptual thinking and communication. That is the biggest difference between this course and a high school course, even an Advanced Placement course. Mathematics is more than a bag of tricks and there are not a limited number of "types" of problems that can be asked. The goal in class is to prepare you to do the homework and not necessarily to show you how to do your homework. The learning occurs when you can move yourself into the unknown territory.

Graders will grade the written homework promptly, and solutions will be made available on the course website. Graders will be expecting you to express your ideas clearly, legibly,

and completely, often requiring complete English sentences rather than merely just a long string of equations or unconnected mathematical expressions. This means you could lose points for unexplained answers. See the homework page for a more detailed rubric.

In fairness to fellow students and to graders, late homework will generally not be accepted. Because sometimes things more important than math homework come up, you have some free passes: Your lowest written assignment score and your three lowest WebAssign scores (one week's worth in both cases) will be dropped in the final grade calculation.

By all means you may work in groups on the homework assignments. Collaboration is a big part of learning and of scholarship in general. However, each student must turn in his or her own write-up of the solutions, with an acknowledgment of collaborators.

There is free math tutoring sponsored by the math department, meeting in room 524 of Warren Weaver Hall. Check the signs posted throughout WWH and the tutoring web page.

Exams. There will be one midterm exam, held in class. The final exams for all lectures are scheduled on **Thursday, May 12th, from 10:00AM − 11:50 AM**. Rooms are TBD. Please make a note of your final exam time and plan your travel schedule accordingly. 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.

Some component of class will be graded. This classwork may take the form of quizzes, group assignments, worksheets, and other types of projects. These scores will be averaged together, again dropping the lowest.

Policy on out-of-sequence exams and missed assignments. We are only able to accommodate a limited number of out-of-sequence exams due to limited availability of rooms and proctors. For this reason, we may approve out-of-sequence exams in the following cases:

- A documented medical excuse.

- A University sponsored event such as an athletic tournament, a play, or a musical performance. Athletic practices and rehearsals do not fall into this category. Please have your coach, conductor, or other faculty advisor contact your instructor.

- A religious holiday.

- Extreme hardship such as a family emergency.

We will not be able to accommodate out-of-sequence exams, quizzes, and finals for purposes of more convenient travel, including already purchased tickets.

Scheduled out-of-sequence exams and quizzes (those not arising from emergencies) must be taken before the actual exam. Otherwise, please talk to your instructor before you return to class.

If you require additional accommodations as determined by the Center for Student Disabilities, please let your instructor know as soon as possible.

Prerequisites. Students who wish to enroll in Calculus III must meet one of the following prerequisites:

- Calculus II (V63.0122) with a C or higher.

- Our department's Calculus III placement test.

- A score of 5 on the Advanced Placement Calculus BC test does not per se qualify for enrollment in Calculus III. See the math deparment's placement web page for more information.

Grades. Your course score will be determined as the following weighted average:

Midterm:	20%
WebAssign:	10%
Written homework:	15%.
In-class work:	15%
Final:	40%

We will convert this score to a letter grade beginning with these values as cutoffs:

Cutoff	Letter grade
93	A
90	A-
87	B+
83	B
80	B -
75	C+
65	C
50	D

Textbook and Materials.

Short Version: You need chapters 10–13 of Stewart's Essentail Calculus and access to Webassign. Webassign access may be purchased through the bookstore or directly through the course's Blackboard website.

Long Version: You need a textbook and you need WebAssign access. We have tried to provide as many options as possible for you to achieve this.

Essential Calculus, Early Transcendentals by James Stewart is the official textbook for the course. NYU has a custom imprint of this text which is sold bundled with access to Enhanced WebAssign. Enhanced WebAssign includes a hyperlinked electronic format of

Stewart's Calculus, Early Transcendentals (of which Essentials is a slimmed-down version) accessible through the web.

In addition to the hardcover custom textbook, the NYU bookstore also has a limited number of looseleaf printings on three-hole punched paper, bundled with access to Enhanced WebAssign. These are less expensive up front, easier to carry around (since you don't have to carry the entire textbook at once), but cannot be sold back to the bookstore.

You may also buy the latest edition of Essential Calculus, Early Transcendentals, ISBN-13 978-0-495-01428-7 non-customized, elsewhere. Then you can buy WebAssign (regular or Enhanced with Stewart's Calculus, Early Transcendentals) from them online directly.

Finally, you may decide to go completely electronic. You may buy online (through iChapters) an electronic format of Essential Calculus, Early Transcendentals, or a subset of that text consisting of which chapters you will need. This will be the exact same text, problem numbering, section numbering, and pagination as the official edition, but is not hyperlinked. With this you could buy regular WebAssign without the electronic text included. Or, you may buy Enhanced WebAssign alone, and we will provide the correspondence between problems assigned in Essentials with those from the full version of Calculus. Or, of course, you could buy both the electronic format of Essential Calculus, Early Transcendentals, and Enhanced WebAssign which includes the hyperlinked version of Essential Calculus, Early Transcendentals.

Which one is right for you? If you want to minimize your total costs but want some kind of paper textbook, it's either a used textbook and regular WebAssign or the official looseleaf edition which includes Enhanced WebAssign. If you don't desire a paper text, get Enhanced WebAssign and nothing else.

If you want the most textbook for your dollar, you probably want one of the paper textbook plus Enhanced WebAssign bundles sold in the bookstore. You'll have the full paper version with no confusion about staying in sync with the instructor, and the full hyperlinked electronic version. The hardcover can be sold back, but the looseleaf is more convenient.

The calculator question. A graphing calculator is encouraged for class discussion and on homework, but not allowed for exams. No specific calculator is endorsed, so do not buy a new one. If you have one already, continue to use that one; if you do not, try free alternatives such as Wolfram Alpha.

CAS Policy on Academic Integrity. The College is a community of the mind. Its students, faculty, and staff all share the goal of pursuing truth through free and open inquiry, and we support one anothers endeavors in this regard. As in any community, membership comes with certain rights and responsibilities. Foremost among these is academic integrity. Cheating on an exam, falsifying data, or having someone else write a paper undermines others who are doing it on their own; it makes it difficult or impossible

to assess fairly a students interest, aptitude, and achievement; and it diminishes the cheater, depriving him or her of an education. Most important, academic dishonesty is a violation of the very principles upon which the academy is founded. Thus, when students enter the College, one of the first things that they are asked to do is to sign a community compact, recognizing these principles of academic integrity. For this reason also, violations of these principles are treated with the utmost seriousness.

Conclusion. We look forward to seeing you in Calculus III!