

# MAT 121: Calculus I

Instructor: Steve Bean

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Office Hours: 11-12 MW

**Text:** *Calculus from Graphical, Numerical, and Symbolic Points of View*, by Ostebee-Zorn. Single hardback edition contains volumes 1-2.

**Class Meeting Times:** 9-11 a.m. 1-3 p.m. daily

**Course Outline and Objectives:** We will begin with Section 1.4. From there, we will cover most of Chapters 1-5. Specific sections to be covered can be found on the Suggested HW Sheet. We will study the derivative from the graphical, analytic, and geometric points of view, and focus on the students' ability to translate fluidly between these points of view. Derivatives of logarithmic, exponential and trigonometric functions, along with standard polynomial and rational functions, will be introduced. Standard formulas, such as the power rule, product rule, quotient rule, and chain rule will be derived and studied. Chapter 5 covers the basic ideas of integration: integral as "signed area", and as an antiderivative (indefinite integral). The Fundamental Theorem of Calculus will be derived and studied. The course will finish with the method of integration by substitution, and finally with the concept of the integral as a limit of Riemann sums.

This course supports the Educational Priorities and Outcomes of Cornell College with emphases on knowledge, communication, and intercultural literacy.

<b>Grading:</b>	HW/Quizzes	10%
	Class Participation	5%
	3 Tests	20% each
	Final Exam	25%

<b>Grading Scale:</b>	A	93-100	C	73-76.99
	A-	90-92.99	C-	70-72.99
	B+	87-89.99	D+	67-69.99
	B	83-86.99	D	63-66.99
	B-	80-82.99	D-	60-62.99
	C+	77-79.99	F	59.99 and below

Test #1	Friday, March 22
Test #2	Thursday, March 28
Test #3	Wednesday, April 3
Final	Wednesday, April 10 8 a.m.-1 p.m.

Material to be covered on each test will be announced in class. The final examination will be comprehensive.

**HW/Quizzes:** There will be a 50-50 chance of a quiz every day except the first day of class and test days. I will determine this by a flip of a coin on the evening before the quiz. Quizzes will be short (generally consisting of one to four questions taken from the Suggested HW Problems). The choice of the problem(s) will also be random. Quizzes will be given in the last 15 minutes of the morning class session.

On days on which we do not have quizzes, Suggested HW problems will be collected. Six of the problems will be randomly selected and graded. A total of 0-10 points will be assigned. Partial credit may be assigned based on whether you have made a *reasonable effort* to solve a problem<sup>1</sup>. If you do not turn in your homework at the time it is called for, your assignment will be considered late and a two-point penalty will be assessed. HW turned in more than 24 hours late will receive a grade of zero.

Before your final class grade is determined, your lowest two HW/Quiz grades will be dropped.

**Homework:** For this class, you will be required on some days to turn in the homework problems you have attempted. It is recommended that you do your homework on loose leaf paper. If you do it in a notebook, you will be asked to tear the appropriate pages from your notebook to be turned in for grading.

See the Suggested HW Sheet for a complete list of problems assigned. These problems may be discussed in class, and variations will almost certainly appear on tests. As part of your participation grade, you will be required on a daily basis to indicate which of these problems you would like to see done in class. If at least half the class requests to see a problem, we will go over that problem.

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<sup>1</sup>Problems that are left blank, or for which the answer is written down without any supporting work or explanation, do not count as “reasonable effort”.

**Participation:** A participation grade will be assigned to each student every day except the first day and the final day. It will consist of three parts:

- (i) Daily reflections about textbook reading assignments.
- (ii) Daily group discussion about textbook reading assignments.
- (iii) Providing feedback, via Moodle, on Suggested HW problems.

See more details on this subject in a separate document.

**Makeups:** If unforeseen problems prevent you from taking a test, notify me as soon as possible (preferably before the test) so that a makeup test can be scheduled for you. Absolutely no makeup of any quiz will be allowed after it has been graded and returned.

**Calculators:** Graphing calculators are encouraged but not specifically required. Each test will be composed of a calculator and a non-calculator portion. Graphs will often be supplied for the calculator portion. **You will not be allowed under any circumstances to use the calculator app on your phone.**

**Attendance:** Class begins at 9:00 a.m. each morning. Be on time and be ready to participate. Afternoon sessions will begin at 1:00 p.m. Exceptions to these hours will be announced in class. Attendance—including excused and unexcused absences—will be recorded daily. If you have an excused absence, be sure to bring it to my attention.

**15th Day Drops:** These will be considered only for those students who:

1. Have no unexcused absences.
2. Have taken all tests and quizzes.
3. Have participated in class and made a determined effort to master the material presented.

**Academic Honesty:** Cornell College expects all members of the Cornell community to act with academic integrity. An important aspect of academic integrity is respecting the work of others. A student is expected to explicitly acknowledge ideas, claims, observations, or data of others, unless generally known. When a piece of work is submitted for credit, a student is asserting that the submission is her or his work unless there is a citation of a specific source. If there is no appropriate acknowledgement of sources, whether intended or not, this may constitute a violation of the College's requirement for honesty in academic work and may be treated as a case of academic dishonesty. The procedures regarding how the College deals with cases of academic dishonesty appear in The Catalogue, under the heading "Academic Honesty."

**Disabilities:** Cornell College makes reasonable accommodations for persons with disabilities. Students should notify the Coordinator of Academic Support and Advising and their course instructor of any disability related accommodations within the first three days of the term for which the accommodations are required, due to the fast pace of the block format. For more information on the documentation required to establish the need for accommodations and the process of requesting the accommodations, see [www.cornellcollege.edu/academic-support-and-advising/disabilities/index.shtml](http://www.cornellcollege.edu/academic-support-and-advising/disabilities/index.shtml).

If you have concerns about any condition (documented or not) you think will hamper your ability to succeed in this course, you should notify me within the first three days of class.

If you have questions about documentation, you can obtain more information at [www.cornellcollege.edu/academic-support-and-advising/](http://www.cornellcollege.edu/academic-support-and-advising/) or from Brooke Paulsen (309 Cole Library).