

NSC 515 CALCULUS I

Lecture Time: MWF 9:30-10:20 am
Lecture Location: Brown Science/Sci 217
Instructor: Zoey Guo
Office: Brown Science 208
Office Hours: By appointment
Email: zguo@marlboro.edu

1. COURSE DESCRIPTION

This is the first of the three-course calculus sequence. This course covers the basic ideas of differential calculus. Differential calculus is concerned primarily with the fundamental problem of determining instantaneous rates of change. In this course we will study instantaneous rates of change from both a qualitative geometric and a quantitative analytic perspective. We will cover in detail the underlying theory, techniques, and applications of the derivative. The problem of anti-differentiation, identifying quantities given their rates of change, will also be introduced.

2. TEXTBOOK

There is no textbook required for the course. I will roughly follow the book *Essential Calculus* by James Stewart and cover chapters 1-4, but all necessary materials to complete the course will be provided. You are also encouraged to use free online sources to aid your understanding of calculus.

3. EXERCISES

There will be exercises both before and after classes. Pre-class exercises should be submitted online by midnight the day before class, and will be graded for completion. Post-class exercises are due at the beginning of the next lecture, and will be graded for accuracy. You are encouraged to work with your classmates on any assignment, but you must submit your own solution.

4. QUIZZES

There will be a number of 10-minute quizzes throughout the semester. The purpose of these quizzes is to ensure that you are progressing well in the course and prepared for upcoming lectures. You will be notified in advance the dates of the quizzes and topics to be covered, and you should expect perfect scores if you have done all the assignments carefully.

5. EXAMINATIONS

There will be two hour-long midterm exams and a final exam. By default all exams are in-class and close-book, but if you convince me that a take-home and open-book exam would better reflect your mathematical skills, you would have that option as well.

6. COURSE EVALUATION

Your scores will weigh as follows in the determination of your course grade:

Pre-class Assignments	5%
Post-class Assignments	15%
Quizzes	10%
Midterm Examination	20% (each)
Final Examination	30%

After computing each student's average as a percentage, the instructor will rank the averages to determine a distribution of final letter grades. The instructor guarantees at least an A to students scoring 90% or higher, at least a B to students scoring 80% or higher, at least a C to students scoring 70% or higher, and at least a D to students scoring 60% or higher. However, the grading scale may be more lenient than this.

7. ACADEMIC INTEGRITY

Students are expected to comply with Marlboro College regulations regarding academic integrity. If you are in doubt about what constitutes academic integrity, speak with the instructor or examine the section "Policy on Academic Integrity" from the Marlboro College handbook. The instructor may report suspected breaches of regulations regarding academic integrity to the Dean of the college.

8. STUDENT WITH DISABILITIES

In compliance with Marlboro College policy and equal access laws, the instructor is available to discuss appropriate academic accommodations that you may require as a student with a disability. Requests for academic accommodations need to be made during the first week of the semester, except for unusual circumstances, so arrangements can be made. For more information, visit: https://www.marlboro.edu/community/undergraduate/disability_services.