

MATH 253:001

Calculus III (CRN 81122)

Summer 2009

M, T, W, R, 1:00–2:05, NH Room 375

Instructor: Prof. Gerardo Lafferiere

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Office Hours: M, T, Th 12:00–12:45, T 9:30–10:15 (or by arrangement)

Grading: will be based on class participation, Homework assignments, two mid-term exams, and a comprehensive final exam. Your final grade will be computed as follows: Homework (20%), two mid-term exams (50%), and a final exam (30%). Class participation will be used in borderline cases.

Class participation: Once a week, or so, you will be required to work on problems in class. You may work in groups of two or three for this purpose. A list of problems from the textbook will be assigned for this purpose.

Homework: A list of selected exercises from the textbook will be assigned almost every week (approximately six assignments in all). You are also required to read the upcoming section from the book before class. Exercises will be discussed in class regularly (at least once a week). Late homework will receive half credit if turned in by the next class and no credit after that.

Exams: All the exams will be based on the homework assignment and the topics discussed in class. Tests are in-class and closed-book. The final exam will be on **Friday, August 14, 1pm–3:20pm**. As a general rule graphing calculators will be allowed in tests. You should double check with the instructor before the day of the test.

Make-up tests: Tests must be taken on the scheduled dates. Make-ups will not be allowed unless proper justification is presented.

Textbook: *Calculus: Concepts and Contexts*, by James Stewart, Brooks/Cole 2001. Third Edition.

Technology Use: Several assignments may require, or benefit from, the use of a graphing calculator or Computer Algebra System (such as Maple or DERIVE). Maple and DERIVE are available in the mathematics computer lab in room NH465.

Syllabus and study tips

The course will cover three general areas:

Infinite Series: Sections 8.1, through 8.9.

Approximation methods: Section 3.8, 4.8, and 5.9.

Vectors and the geometry of space: Sections 9.1 through 9.7.

Studying tips

Learning Calculus requires both a good grasp of the central concepts and practice solving concrete problems. Substantial time should be given to both. A good rule of thumb is that you should devote two hours of home study for each hour of class time. Some students may need a little less, some a little more. This course builds on Calculus I and II so a strong background on the topics of those courses is needed. If your background is not strong you should immediately review the relevant material.

Below are a few guidelines that have proven successful.

1. **READ THE BOOK.** While we will discuss most topics in class the textbook offers alternative presentations or additional examples. It is best if you read the upcoming lesson prior to class. Even a light reading will help you ask more incisive questions to get to the heart of the topic.
2. **DO PRACTICE EXERCISES.** The student solutions manual contains solutions to all odd numbered problems. When doing the homework practice first with a similar odd-numbered problem. You can then check your understanding with the printed solution. If this does not help seek your instructor for additional assistance. Use the scheduled office hours or ask for a special appointment.
3. **TAKE NOTES.** Not everything said in the classroom makes it to the board. Besides copying what is on the blackboard make your own annotations. You are the best judge of what needs clarification for your own understanding.
4. **READ THE NOTES.** When studying or doing the homework check the notes for examples and/or clarification. If notes are not clear then bring questions to class or go to office hours.