

MATH 151 - Calculus

Fall 2012

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Office Hours: M 2:30-3:30, W 10:00-11:00, F 1:27-2:45 (over lunch)
and by appointment

TA: Karen Espinoza (klespinoza@smcm.edu) (section 04)
Kevin Koeser (krkoeser@smcm.edu) (section 03)



“Mathematics is the art of giving the same name to different things.” – ????

Course Content

This class is all about understanding how quantities change. And since, according to Heraclitus (or, at least, according to Wikipedia’s information about this philosopher) “All is flux, nothing stays still,” one might argue that Calculus is the study of *everything*. While this is something of an exaggeration, it is true that the ideas and concepts of Calculus can be found virtually everywhere.

Fortunately, we will be covering a more manageable set of topics. Here are some of them:

- Functions: Inspired by sections 1.1-1.3 from Chapter 1
- Limits of functions: Chapter 2
- Differentiation: Chapter 3
- Applications of the Derivative: Chapter 4
- Integration: Chapter 5
- Additional Topics (time permitting): Volumes, Arc-Lengths and Exponentials

Textbook

Single Variable Calculus (5th Edition) by J. Stewart

Homework

Homework will be assigned daily (in class) and collected weekly. You are encouraged to work together on homework problems, but the final preparation and write-up must be your own. Your submitted work should be stapled together and should have your name on every page. Neatness and clarity

are expected. **Late homework will not be accepted for credit.** Homework will be graded for correctness, clarity, and justification. To receive full credit you must show all of your work, explain your work when necessary, and write legibly.

Exams

There will be three exams and a cumulative final.

- Exam 1: Chapters 1, 2 and some of Chapter 3 (9.25.12)
- Exam 2: Chapter 3 and some of Chapter 4 (10.23.12)
- Exam 3: Chapter 4 and some of Chapter 5 (in class, 11.19.12)
- Final (for section 03): all chapters (12.10.12, 9-11:15 am)
- Final (for section 04): all chapters (12.13.12, 9-11:15 am)

Grades

Grades will be computed as follows:

- Homework: 30 %
- Class participation : 5%
- Exam 1: 15%
- Exam 2: 15%
- Exam 3: 15%
- Final Exam: 20%

Students with Disabilities

Any student with a disability requiring accommodations in this class is encouraged to contact me. Students with a disability may also wish to contact Lenny Howard in the Office of Academic Services.