

Math 251, CRN 34632, Calculus I, Spring 2013

Class Time: MTuWF 11-11:50a.m. in 142 HEDCO Education Building
Instructor: Dr. Marcin Bownik
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Office Phone: 541-346-5622
Office Hours: 12–1p.m. Mon. and Fri., 10–11a.m. Tue., or by appointment
Textbook: *Calculus: Concepts and Contexts*, 4th edition by James Stewart

1. **Background and Goals.** The successful student will be able to apply the basic precepts of differentiation and derivatives in order to investigate the quantitative and qualitative behavior of mathematical functions. This will include finding local and global extrema, sketching graphs (interpreting derivatives as rates of change and calculating limits to resolve questions about behavior at infinity and points of discontinuity).

A significant proportion of the graded effort for the course will encompass the ability to use mathematical methods, in particular differentiation, to model phenomena that arise in the natural and social sciences (this means lots of word problems). This includes optimization, related rates of change, linear approximation and applications of exponential growth and decay.

More specifically, by the end of the quarter the successful student will be able to differentiate combinations of common mathematical functions, produce linear approximation for these functions, and apply these mathematical tools to solve problems of the type which may arise in real world situations.

2. **Exams.** There will be two midterm in-class exams on Wed. 4/24, and Wed. 5/15 and a final exam (combined with all sections of Math 251) on Wed. 6/12 6-8p.m. in 150 Columbia.
3. **Quizzes.** In addition to weekly MWF lectures, on Tuesday there is a discussion class and a quiz (except the first and midterm exam weeks). Quizzes are meant to test understanding of the material from the last few classes. There will be no make-up quizzes, since the lowest quiz score will be dropped.
4. **Homework.** Homework problems will be assigned each week and be due in on the following Wednesday on the material of the previous week. No late homework will be accepted.
5. **Grading.** The grading distribution will be as follows:

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| Homework: | 20% |
| Quizzes: | 10% |
| Each of the Midterm Exams: | 20% |
| Final Exam: | 30% |