

Mathematics 105 C & D - Calculus I
Fall 2005

Instructor: Caleb Shor, 205 Hathorn, cshor@bates.edu, x6403.

Office Hours: M 2-3, W 9-10, F 10-11, and by appointment.

Text: Calculus from Graphical, Numerical, and Symbolic Points of View, second edition, by Ostebee and Zorn.

Course Webpage: <http://abacus.bates.edu/~cshor/ma105/>

Labs: Labs will meet during the weeks of September 19, October 3, October 24, November 7, and November 28 in Hathorn 209. You will sign up for a specific day and time during the first week of class. Please contact assistant-instruction Eric Towne (etowne@bates.edu) with any lab-related questions.

Walk-in Tutoring: Available at the Mathematics and Statistics Workshop, Canham House 1 & 2, Sunday-Thursday 7-9pm, Monday-Thursday 1-4pm, and by appointment. More information is available from <http://abacus.bates.edu/acad/acad.support/msw/>

Quizzes: There will be a quiz every Monday covering material from the previous week's homework.

In-Class Exams: Friday, October 7 and Friday, November 11. (Note the dates of exam review sessions at the end of this syllabus.)

Final Exam: Friday, December 9, at 8:00am. (Note the dates of exam review sessions at the end of this syllabus.)

Note: If you have a conflict with a quiz or exam, notify me at least one week beforehand so that we can arrange for you to take it at an earlier date.

In this course, we will see the two central ideas of calculus - differentiation and integration. Differentiation is used to calculate rates of change, while integration is used to calculate sums of infinitely many infinitely small quantities. Amazingly, these seemingly unrelated ideas are actually quite closely connected. Their relationship is given by the Fundamental Theorem of Calculus, which we will see near the end of the course. Along the way, we will develop a number of differentiation techniques and see how they can be used for real-world applications.

This course will cover chapters 1-5 of the textbook. No prior knowledge of calculus is assumed. However, we will be using material from high school math - algebra, exponentials and logarithms, and trigonometric functions. If you have missed any of this material, the Math Workshop will be available to help you fill in the gaps.

Homework: Homework is assigned every class. Since the course material is continually building upon itself, it is very important to keep up with the homework assignments. Your homework will not be graded - however, many problems on the quizzes will come directly from the homework.

I strongly encourage you to work with other students on the homework assignments. Working with fellow students is often quite valuable. However, to prepare for the quizzes and exams, you should make sure you can write up the solutions on your own.

Exams: Note the dates of the in-class exams and the final exam above. The in-class exams will not be cumulative. The final exam will be cumulative, but it will focus more on material covered after the in-class exams. You are expected to have a calculator for all exams.

Review Materials: Pre-exam review sheets, copies of old exams and quizzes, and other study tools are online at
<http://abacus.bates.edu/~etowne/mathresources.html>

Review Sessions: There will be one coursewide review prior to each midterm and two prior to the final (each covering half the course). They will be in Pettengill G52 (Keck Room) at the following times.

- Wednesday, October 5, 7 p.m.
- Wednesday, November 9, 7 p.m.
- Monday, December 5, 7 p.m.
- Wednesday, December 7, 7 p.m.

Grading: Grading for this course is given by: quizzes 15%, labs 5%, in-class exams 25% each, final exam 30%.

Note that in order to pass, you must take all exams and receive a minimal passing grade on the final exam.