

## MATH 10B: METHODS AND TECHNIQUES OF CALCULUS(B)

Section 4 Instructor: Mario Bourgoïn, Goldsmith 204, x6-3063, mob@brandeis.edu

Course Coordinator: Mario Bourgoïn, Goldsmith 204, x6-3063, mob@brandeis.edu

**TEXT.** *Single Variable Calculus: Concepts and Contexts*, James Stewart, 4th edition.

**SYLLABUS.** The course is an introduction to integral calculus of one variable with emphasis on techniques and applications. We will cover a selection of sections from the text's Chapters 5 through 6, and Chapter 8. By the end of the semester, you will understand

- the definition of the definite integral, and its interpretation in terms of area and net change,
- the relationship between differential and integral calculus,
- how to compute integrals by elementary means and by using the techniques of substitution, integration by parts, and partial fractions,
- improper integrals, and how to determine if an improper integral converges,
- how to use integration to compute area, volume, arc length, and average value,
- the definition of an infinite series and how to test infinite series for convergence,
- the definition of a power series and how to compute its interval of convergence, and
- how to compute the Taylor series of a function.

**GRADES.** Your grade in the course will be based on the following:

**25% Each for Two Midterms, in October and November, 6:30–8:30 PM**

**30% Final Exam, December 16, 9:15 AM–12:15 PM**

**10% Assignments**

**10% Quizzes**

### POLICIES.

**EXAMS.** Midterm exams are in the evening. If you have a genuine and irremovable schedule conflict (such as a class, lab, or another exam) with a MATH 10B midterm exam, inform your instructor at least two weeks before the exam. If the conflict can't be resolved, we will offer you a make-up exam. *You must obtain permission to miss an exam from your instructor BEFORE the exam is held.* The scheduling of your final exam is set by the Registrar, and it will *never* be given early.

**ASSIGNMENTS.** Homework assignments will be collected once or twice a week. *No late assignments will be accepted*, but your three lowest assignment grades will be dropped. Missed assignments count as zeros.

We encourage you to discuss assignment problems with your classmates, but you should write the solutions up on your own (see below). We will usually not have time to discuss assignment questions in class. If you have questions about assignment problems, you should go to your instructor's office hours or to evening help sessions (see below).

**QUIZZES.** Short quizzes will be given often. *No make-up quizzes will be given*, but the lowest 25% of your quiz grades will be dropped. Missed quizzes count as zeros.

**CALCULATORS.** You should have access to a scientific calculator. You do not need a graphing calculator. *Calculators are NOT allowed during exams or quizzes*, so we recommend that you try to avoid using one for your assignments.

*STUDENTS WITH DISABILITIES.* If you need academic accommodations because of a documented disability, you should contact the course coordinator, Professor Mario Bourgoïn, and present your *Brandeis* letter of accommodation without delay. If you have questions about documenting a disability or obtaining a letter of accommodation you should contact Beth Rodgers-Kay in Undergraduate Academic Affairs at 6-3470. Letters of accommodation should be presented at the start of the semester since *accommodations cannot be granted retroactively*.

*ACADEMIC INTEGRITY.* You are expected to follow the University's policy on academic integrity (see <http://www.brandeis.edu/studentlife/sdc/ai>). In particular, you are expected to be familiar with the section of the Rights and Responsibilities Handbook concerning academic integrity. If you have any questions about how these policies apply to your conduct in this course, please ask. Instances of alleged dishonesty will be forwarded to the Office of Student Life for possible referral to the Student Judicial System.

## ASSISTANCE.

*LATTE.* All course materials for MATH 10B will be available on-line your MATH 10B LATTE course page. Log in to LATTE at <http://moodle.brandeis.edu> using your UNet username and password.

Optional self-quizzes with complete solutions are available on LATTE. They cover the material being studied in the course. We encourage you to use them to check your mastery of the course material, on your own time and at your own pace, without the pressure of a grade.

*OFFICE HOURS.* You are encouraged to use your instructor's office hours whenever you have questions about the course material. If you can't attend their office hours, make an appointment with them to meet at another time.

*EVENING HELP SESSIONS.* The department offers evening drop-in help sessions to MATH 10B students, Monday through Thursday 7:00–9:00 PM, in the Math Common Room, Goldsmith 100. The sessions will start on Tuesday, September 6 and continue until the last day of classes.

## GETTING INTO A SECTION OF MATH 10B.

- *You may use sage (<https://sage.brandeis.edu>) to enroll in a section. You may not be enrolled in more than one section.*
- *Students who check sage frequently usually can get into one of their top choices of section.* If the section you want is closed, try for another section or keep using sage to try for your first choice. There is a lot of movement in and out of sections during the first week of classes. If you're the next person checking a section after a student has dropped it, you'll get that open spot. In the meantime, you can and should attend class, even if you haven't been able to enroll in a section. All the instructors are used to this. When you turn in homework in one section and then switch to another, your first instructor will give the graded assignment to your new instructor.
- *We will not shut you out of MATH 10B.* You will be able to enroll in a section that fits your schedule, although it may not be your top choice. If you have not been able to enroll in a section that fits into your academic schedule by Monday, September 12, please see Ms. Janet Ledda in the Mathematics Department office, Goldsmith rooms 216–218. Ms. Ledda will check your schedule on sage and then, if there is no open section that fits your schedule, will give you an override code *but it may be not into your top choice of section.*
- *Ms. Ledda is the only person who can give override codes.* The Mathematics Department does not keep waiting lists, also known as demand lists.