MATHEMATICS 190
BROWN UNIVERSITY
FALL 2018

Instructors: M. Nastasescu, Z. Zhang.

Office hours: To be announced in class

Text. <u>Single variable Calculus (early transcendentals)</u>, James Stewart.

Prerequisites: You must be comfortable with differentiation. You should also be comfortable with some integration techniques, including substitution.

Recitation sections. They meet on Thursdays 12-12.50 pm and 4-4.50 pm.

General rules. You should attend every lecture and go to the recitation section each week. Should you miss a lecture or a recitation even if you have a good reason for doing so like an emergency or religious observance, you are still responsible for knowing the content of the lecture, including organizational matters such as changes in homework assignments or exam dates. The use of cell phones during classes and/or exams is STRICTLY PROHIBITED and should remain switched off at all times.

Examinations. There are no excuses other than incapacitating illness, family emergency or conflict with an exam at another course for missing an exam. If you miss the midterm for one of the above reasons, then your final exam score will be used to determine the midterm score. If you miss the final for one of the above reasons, you should contact your instructor for a make-up exam. The regular exam dates will be as follows:

Mid-term 1: Wednesday October 10, 2018, 6-7pm
Mid-term 2: Wednesday November 14, 2018, 6-7pm
Final exam: Final Exam period

Homework. The homework will be assigned every Wednesday and should be turned in the following week during recitation. The problem sets are challenging, do not leave them until the last minute! The only way to understand this subject is to work on a lot of problems, so it is vital that you DO THE HOMEWORK! Please prepare your homework according to the following rules:

1. Write your name clearly at the top of every page.
2. Put the problems in order, indicating clearly any you have skipped.
3. STAPLE your homework. Paper clips, folded corners, etc., are not acceptable.
4. Turn in assignments on time. No late homework will be accepted.
5. Write clearly. If your homework is too messy, the grader may choose not to grade it.

Quizzes. 15 minute Quizzes will be given at the beginning of each recitation. There will be NO make-up quizzes. However, you will be allowed to drop the two lowest grade quizzes.

Grading. The course grade will be determined on the following basis:

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Problem sets 5%
Quizzes 5%
Mid-term 1: 25%
Mid-term 2: 25%
Final exam: 40%

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Math Resource Center. The Math Resource Center (MRC) is a great place to get help with the material that you find confusing and with problem sets you are having trouble with. The MRC is staffed by graduate students from the Department of Mathematics. For more information contact our web page, http://www.math.brown.edu/mrc/.

Syllabus.
0. Review of vectors and analytic geometry (Multivariable, Chapter 12: 12.1-12.5)
1. Review of integration, Section 6.4, 7.1, 7.2
2. Section 7.3, 7.4, 7.5

3. Section 7.8, 8.1, 8.2
4. Section 8.3, 8.5 (Special emphasis on moments and center of mass)
5. Section 9.1, 9.2, 9.3, 9.5
6. Section 10.1, 10.2, 10.3
7. Section 10.4, 10.5, 10.6
8. Section 11.1, 11.2, 11.3
9. Section 11.4, 11.5, 11.6, 11.7
10. Section 11.8, 11.9, 11.10
11. Section 11.8, 11.9, 11.10

Course-related work expectations: Students will meet 3 hours per week in class (42 hours total), 1 hour per week in discussion section (14 hours total). Homework and readings are estimated around 8 hours per week (111 hours total). In addition, there is a 3-hour final exam for which approximately 20 hours of review is assumed.

Disability support: Brown University is committed to full inclusion of all students. Please inform your instructor if you have a disability or other condition that might require modification of these procedures. You should also contact the Student and Employee Accessibility Services at 401-863-9588 or SEAS@brown.edu.

Homework 1 (9/13): Sect 12.2: 20, 25, 28, 29; Sect 12.3: 20, 22, 28, 30, 32, 50, 53, 58, 64.