MATH V1201, SECTION 12

Calculus III, Fall 2015

1. Essentials

Meeting time: MW 6:10 – 7:25pm, 207 Mathematics building
Instructor: Shrenik Shah

Office: 626 Math
Email: s.shah@columbia.edu
Webpage: https://www.math.columbia.edu/~snshah/teaching.html
Office hours: Mondays 7:30–8:30pm, Wednesdays 4:15–5:15pm, or by appointment.
WebAssign class key: columbia 4073 4604
Through WebAssign, you will have access to an e-book version of the textbook.

Teaching Assistant: John Long, jjl2215@columbia.edu

2. Overview

Welcome to Calculus III! The topics you will be learning about this semester are
- vectors and the geometry of space (Section 10.5 and Chapter 12),
- vector functions (Chapter 13), and
- functions of several variables and partial derivatives (Chapter 14).

The prerequisite material for this course is covered in Calculus I. Familiarity with the material of Calculus II is helpful but not essential. Please let me know if you have any questions regarding whether this is the right course for you.

3. Resources

Many find calculus to be a challenging subject, so I strongly encourage you to make use of the resources at Columbia and beyond that may help you learn the essential ideas of the course, including
- the WebAssign system, which has tutorials on the material of the course
- the Columbia (406 Math) and Barnard (333 Milbank) Help Rooms, for which the weekly schedules can be found at: http://www.math.columbia.edu/general-information/help-rooms/
- my office hours, tentative times for which are listed above; if these times do not work, you may schedule an appointment instead
- Columbia tutoring services, information about which can be found at: http://www.math.columbia.edu/general-information/tutoring-services/
- online resources, including for instance Khan Academy: https://www.khanacademy.org/math/multivariable-calculus
If you would like to either

- ask me a question about the course material, or
- give me feedback about my teaching, the textbook, WebAssign, or anything else,

I have set up an anonymous form at: https://docs.google.com/forms/d/1xv1z6Jl12VRFCTLTUH2kCL1S6p_Sm8dgqq06g-Kbj5M/viewform

For questions/answers about the course material that may be helpful to all students, I will post them in the FAQ section (possibly edited and without names) on my webpage.

4. Grading policy

There will be two midterms and one final. There will also be weekly homework assignments.

Grade breakdown:

- Midterms: 20% each
- Final exam: 40%
- Homework: 20%

The grade distribution will be consistent between the different Calculus III sections.

Midterms: In class on October 7 (Wednesday) and November 18 (Wednesday).

Final: The final exam time is on Dec 21 (Monday), 7 – 10pm.

Exam policies: No electronic devices or study aids/notes of any kind are allowed on the exams. (Calculators are not allowed.)

There are no make-up exams. If exceptional circumstances arise, let me know as soon as possible so an arrangement can be made. You will need to provide a letter from the dean.

Homework: Part of the assignment will be submitted through WebAssign. The other part should be dropped in the section mailbox, which may be found outside 410 Math, before the start of class on Wednesday. Clearly print your name and UNI and staple all pages of your assignment. Assigned problems will be posted on CourseWorks and the course webpage. If there are any issues with WebAssign (i.e. not accepting a correct answer) please email me a screenshot of the page with your answer and I will fix the grade.

Late homework will not be accepted. To compensate, the lowest two grades of all your assignments will be dropped.

Collaboration: You may freely discuss homework problems with other students, but you must write the answers in your own words. You must enter the WebAssign homework answers yourself, and you must fully understand how to obtain the solutions you enter there.

Integrity: Please read the Faculty Statement on Academic Integrity:
https://www.college.columbia.edu/academics/integrity-statement
5. Special accommodations for students with disabilities

In order to receive disability-related academic accommodations, students must first be registered with the Disability Services (DS). More information on the DS registration process is available online at: [http://health.columbia.edu/disability-services/](http://health.columbia.edu/disability-services/)

Registered students must present an accommodation letter to the professor before exam or other accommodations can be provided. Students who have, or think they may have, a disability should contact DS promptly for a confidential discussion.

6. Schedule

The following is a tentative schedule. The contents of each class may also vary slightly during the semester. Please read the relevant book sections before classes.

<table>
<thead>
<tr>
<th>Date</th>
<th>Book sections</th>
<th>Homework</th>
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<tbody>
<tr>
<td>Sep 9</td>
<td>10.5</td>
<td>HW 1: due We 9/16</td>
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<tr>
<td>Sep 14, 16</td>
<td>12.1, 12.2, 12.3</td>
<td>HW 2: due We 9/23</td>
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<tr>
<td>Sep 21, 23</td>
<td>12.3, 12.4, 12.5</td>
<td>HW 3: due We 9/30</td>
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<td>Sep 28, 30</td>
<td>12.5, 12.6</td>
<td>HW 4: due We 10/14</td>
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<tr>
<td>Oct 5, 7</td>
<td>review; Midterm 1 (Section 10.5, Chapter 12)</td>
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<tr>
<td>Oct 12, 14</td>
<td>13.1, 13.2</td>
<td>HW 5: due We 10/21</td>
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<tr>
<td>Oct 19, 21</td>
<td>13.3, 13.4</td>
<td>HW 6: due We 10/28</td>
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<td>Oct 26, 28</td>
<td>13.4, 14.1, 14.2</td>
<td>HW 7: due We 11/4</td>
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<td>Nov 4</td>
<td>14.3</td>
<td>HW 8: due We 11/11</td>
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<tr>
<td>Nov 9, 11</td>
<td>14.3, 14.4, 14.5</td>
<td>HW 9: due We 11/25</td>
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<td>Nov 16, 18</td>
<td>review; Midterm 2 (Chapter 13 through Section 14.5)</td>
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<td>Nov 23, 25</td>
<td>14.6</td>
<td>HW 10: due We 12/2</td>
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<td>Nov 30, Dec 2</td>
<td>14.7, 14.8</td>
<td>HW 11: due We 12/9</td>
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<td>Dec 7, 9</td>
<td>14.8, Appendix H</td>
<td>HW 12: due Mo 12/14</td>
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<td>Dec 14</td>
<td>review session</td>
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<td>Dec 21</td>
<td>Final 7 – 10pm, Location: Math 207 (the usual room)</td>
<td>(covers the whole semester, with an emphasis on 14.6-8)</td>
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