Math 2500 Syllabus

1. COURSE INFORMATION

Dr. Jason Cantarella
Boyd 448
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Office hours: Monday 3-5.

Boyd 323
9:05-9:55 MWF
http://www.jasoncantarella.com/
webpage/index.php?title=Math_2500

2. TOPICS COVERED

Vectors and Geometry Review (10)	Vector Functions and Derivatives (11.1)
Integrals of Vector Functions (11.2)	Arc Length in Space (11.3)
Functions of Many Variables (12.1)	Limits and Continuity (12.2)
Partial Derivatives (12.3)	Chain Rule (12.4)
Directional Derivatives/Gradients (12.5)	
First Exam	

Tangent Plane (12.6)	Extreme Values and Saddles (12.7)
Lagrange Multipliers (12.8)	
Double and Iterated Integrals (13.1-2)	Area and Integration (13.3-4)
Triple Integrals (13.5)	Moments and Centers of Mass (13.6)
Triple Integrals in Cylindrical Coordinates (13.7)	
Second Exam	

Line Integrals (14.1-14.2)	Potential Functions (14.3)
Green's Theorem (14.4)	Surfaces and Area (14.5)
Stokes' Theorem (14.7)	Divergence Theorem (14.8)

Final Exam (8-11am), Boyd 323	M 12/13

3. PREREQUISITES

Students are expected to have MATH 2250/2260, the honors calculus courses, or the "Calculus with Theory " 2400/2410 sequence or equivalent in order to enroll in the course.

4. COURSE GOALS

Students will develop computational fluency with multivariable differentiation and integration. Applications and modeling problems introduced in the course will develop some intuition for applying these concepts in scientific and technical applications.

5. DISCLAIMER

The course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary.

6. PRINCIPAL COURSE ASSIGNMENTS

The course will have two midterm exams and a final examination. Homework will be due weekly, generally on Tuesdays. Informal "pop" quizzes may be added on an irregular basis. These will be included in the homework grade. For this class, we're using a web-based homework system called WebWork. The login link is

        https://webwork2.math.uga.edu/webwork2/Math2500_Cantarella_F10/

Your username comes from your uga.edu email address. If your email address is jones@uga.edu, then your username is jones. Your password comes from your 810 number, but it's formatted a little bit oddly. If your UGAcard says your 810 number is 810 012 9770, then your 810 number appears on our classroll as 810-01-2977 (the last 0 on the card is not actually part of your 810 number– it just means that this is your first UGAcard). Your password is then 810-01-2977, **including the dashes**.

`WebWork` is different from your previous experiences with math homework. Until the assignment is due, **you can try the problems as many times as you like,** and the system will tell you whether or not you have the right answer. This lets you correct your work immediately.

After the assignment's due date, the system will show you the correct answer for each problem when you try it (but your answers won't be scored). The funny thing about `WebWork` is that **the due dates are absolute**. Since the system shows you the answers immediately after the due time, I can't give extensions on homework. You may complete assignments in advance if you want to.

You are welcome to work together on `WebWork` problems, but be warned: **the problems are a little different for each student**, so copying other folks' answers won't work.

When you first login to `WebWork`, you'll see three buttons on the left. Use the "Change Email" button to enter your email address and the "Change Password" button to change your password. Then try "Begin Problem Sets" to see how the system works. You can select a set and print it out in PDF format to work out the problems on paper if you like. Your problems will be the same when you login again to enter the answers.

7. GRADING AND WP/WF POLICY

The overall course grade is computed from homework, exam, and final grades by the formula:
  (1) 20% for each regular exam.
  (2) 30% for the final exam.
  (3) 30% for the homework assignments and in-class quizzes.

After grades are calculated for each student using these weights, the instructor will rank the students by average and determine thresholds for grades of A, B, C, D, and F. Generally, these are somewhat lower than 90 %, 80 %, 70 %, and 60 % of the total points in the course. Though improvement and other circumstances are taken into account in deciding thresholds for letter grades, students with a higher numerical average almost always receive higher letter grades than those with lower numerical averages.

In order to receive a grade of "WP" before the first exam, you must have scored at least 50 % of the homework points available by the date of withdrawal. After the first exam, this policy will remain in force for a two week grace period. After this period expires, you must have scored at least 50 % of the homework points **and** 50 % of the first exam points in order to receive a grade of "WP".

8. ATTENDANCE POLICY

Students are expected to attend class regularly. Students who miss more than 6 classes (two weeks of class) may be withdrawn from the course by the instructor.

9. ACADEMIC HONESTY

As a University of Georgia student, you have agreed to abide by the University's academic honesty policy, "A Culture of Honesty," and the Student Honor Code. All academic work must meet the standards described in A Culture of Honesty found at: `www.uga.edu/honesty`. Lack of knowledge of the academic honesty policy is not a reasonable explanation for a violation. Questions related to course assignments and the academic honesty policy should be directed to the instructor.

It is perfectly acceptable to work on homework problems in groups in this course. However, the help you should get from your fellow students should enable you to complete the problem on your own. Recruiting another student to complete the homework for you, or to simply provide answers to the problems, is a violation of the honesty policy.

10. REQUIRED COURSE MATERIAL

The course textbook (University Calculus, by Hass, Weir, and Thomas) is required for the course.

11. MAKE-UP EXAMINATIONS

No makeup examinations will be given in the course. If you are absent from a scheduled exam, and your absence is excused (generally, this requires a medical or legal explanation, with supporting documentation), the portion of the course grade determined by the missing exam will be divided equally between the other exams (including the final exam). Students with an excused absence from all three exams will be withdrawn or given a grade of "I".