# Math 2260 Syllabus

1. COURSE INFORMATION

Dr. Jason Cantarella Boyd 448 jason.cantarella@gmail.com Office hours: Wednesday 2-5 Boyd 222 9:30-10:45 TR (Tues/Thurs), Boyd 222 10:10-11:00 W http://www.jasoncantarella.com/

## 2. COURSE SCHEDULE

The course works by having you read sections in the book to get an overview of the course material immediately BEFORE we cover it in class. When we start a new section, we'll start with a short reading comprehension quiz at the beginning of class. These are the class days of the quizzes. The quiz schedule will be constantly updated on the course Google calendar; these are the initial dates.

Topics	Sections	Reading Quiz Day
Review of Material from Chapter 5	5	(no quiz)
Volumes by slicing and rotation	6.1	1/11
Volumes by cylindrical shells	6.2	1/12
Arclengths	6.3	1/17
Areas of surfaces of revolution	6.4	1/18
Work	6.5	1/19
Center of Mass and Moments	6.7	1/25
Separable Differential Equations	7.2	1/26
Integration by parts	8.1	2/1
Trigonometric Integrals	8.2	2/7
Trigonometric Substitutions	8.3	2/14
Partial Fractions	8.4	2/16
Numerical Integration	8.6	2/22
First Exam (all sections through 8.4 and Anki cards, NOT 8.6)		2/28
Discussion of Exam		3/2
Improper Integrals	8.7	3/1
Sequences	9.1	3/14
Series	9.2	3/15
The Integral Test	9.3	3/21
Comparison Tests	9.4	3/22
Ratio and Root Tests	9.5	3/28
Alternating Series	9.6	3/29
Power Series	9.7	3/30
Taylor and MacLaurin Series	9.8	4/5
Convergence of Taylor Series	9.9	4/6
Binomial Series and Applications	9.10	4/12
Second Exam (all sections through 9.7, emphasis on 8.6-9.7)		4/13
Discussion of Exam		4/18
Coordinate Systems	11.1	4/18
Vectors	11.2	4/19
The Dot Product	11.3	4/20
The Cross Product	11.4	4/25
Lines and Planes in Space	11.5	4/26

Final Exam (8-11am), Boyd 222 (all sections)

5/2 (Monday)

#### 3. PREREQUISITES

The general prerequisite for the course is a solid understanding of differentiation and basic techniques of integration comparable to the MATH 2250 course. In particular, students should have solid algebra and trigonometry skills, and be able to compute integrals and derivatives of polynomials, trigonometric functions, exponential and logarithmic functions, and inverse trigonometric functions. Students should know how to take limits.

## 4. COURSE GOALS

The goal of the course is for the students to become fluent in using various techniques of integration to solve applied problems. The main content of the course is the theory of sequences and series leading up to Taylor's Theorem: that any function may be approximated by polynomials within known error bounds, and that these approximations may be used to estimate limits, derivatives, and integrals of the functions.

#### 5. DISCLAIMER

"The syllabus is a general course plan, but deviations may become necessary over the course of the semester." Among other things, we may change the dates of the exams if the class runs slower or faster than expected. In this case, we'll announce the change several times in class, but may or may not update this document. If you miss the exam I won't be able to help you.

# 6. PRINCIPAL COURSE ASSIGNMENTS

The principal assignments in this course are a set of weekly homework assignments. For this class, we're using a web-based homework system called WebWork. You can find the login link on the course webpage. Homework is due every week on Wednesday; answers are posted the next morning.

Your username is your email username (example: jsmith234@uga.edu has username jsmith234). Your initial password is your 9-digit student ID number in the form 810123456 and you should change after you login for the first time.

The second major set of assignments in the course are reading assignments. These will be assessed with in-class quizzes on the reading material. The third major set of assignments in the course are the Anki memorization cards. These will be assessed with in-class 'pop' quizzes, generally given along with the reading quizzes.

# 7. GRADING AND WP/WF POLICY

The overall course grade is computed from homework, exam, and final grades by the formula:

- (1) 30% for each exam (60% for both in-class exams).
- (2) 30% for the final exam.
- (3) 10% for the WebWork homework assignments and in-class quizzes.

Here's how the grading process works. First, I compute an overall course grade for you on a scale of 0-100 by combining your exam and homework grades using the weights above. After computing this score, I rank all the students in the class in-order by this score. Then I set cutoffs for grades of 'A', 'B', 'C', and 'D'. Generally, these are somewhat lower than 90, 80, 70, and 60. When I'm setting the cutoff, I look at the students immediately above and below the line, and try to take into account improvement and other circumstances. I never, ever reorder the list. It's worth saying that the State of Georgia trusts me with the job of deciding grades, and while I'm well aware that your grades determine your HOPE eligibility, I can only grade the course based on what's in your written work.

7.1. What if I need to withdraw? The university requires us to set a formal policy for assigning a grade of "WP" instead of the default grade of "WF" when a student withdraws from the class. Here is mine. If you withdraw *within two weeks of the first exam*, that is, by 3/14, you must have scored at least 50% of the homework points available by the date of withdrawal. After 3/14, you must have scored at least 50% on the first exam *and* 50% on the homework in order to get 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. In this case, they are subject to the "WP/WF" policy above.

#### 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.

Unfortunately, in recent years, academic dishonesty has been on the rise at the University, and it has happened in my classes as well. So I want to be very clear: Academic dishonesty will not be tolerated in my classroom. Here are some things you might not have considered about academic honesty at UGA.

- (1) **Every** instance of suspected academic dishonesty must be handled through the University process. The instructor does not have a choice about whether to invoke the university process.
- (2) Using your phone (for anything) during a test is a violation of the academic honesty policy, which is handled through the University process.
- (3) The most common consequence for a first offense of cheating on an exam is an immediate grade of "WF", and withdrawal from the course. In some cases, this may be accompanied by a dishonesty transcript notation or other punishment.
- (4) The most common consequence for a second offense is removal from the University, either temporarily or permanently.

#### 10. REQUIRED COURSE MATERIAL

Since we're doing regular reading assignments, the book (Hass/Weir/Thomas, University Calculus, 3rd Edition) is absolutely required. Students are required to download and install the shareware Anki application to complete the memorization assignments.

### **11. MAKEUP 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(s) will be divided equally between the other exams (including the final exam). Students with an excused absence from all in-class exams and the final will be withdrawn or given a grade of "I".