

**MATH 3243 – Advanced Calculus**  
**Fall 2019**

**Instructor:** Dr Scott Gordon

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**Office Hours:** MWF 11:00–12:00, 1:00–2:00 or by appointment.

**Time and Location:** MW 3:30–4:45 (Pafford 106).

**Textbook:** *Elementary Analysis: The Theory of Calculus*, 2nd ed, by Kenneth A. Ross.

**Course description:** A rigorous study of concepts of single-variable calculus. Topics include properties of the real numbers, sequences and series, limits, continuity, differentiation and integration.

**Homework Exercises:** Problems assigned after each lesson will be divided into two categories: exercises and turn-in problems. Exercises will not be graded and are designed to help you understand the important concepts and prepare for the tests.

**Turn-in problems:** There will be approximately 150 points worth of turn-in problems assigned during the semester. Your answers must reflect your own work and you may seek assistance only from me while working on them. If a problem is turned in late, 20% of its point value will be deducted from your grade for each day past the due date.

**Tests:** There will be four one-hour tests worth 80 points each (Test dates: 9/9, 9/30, 10/21, 11/11).

**Rescheduling Tests:** If you have a valid reason for missing a test, you may be allowed to reschedule, but you must make arrangements with me *in advance*.

**Final:** There will be a *cumulative* final exam worth 160 points on 12/11, 2:00–4:00.

**Grading:** Your numerical grade will be your total points (on tests, turn-in problems, and the final) as a percentage of the total number of possible points. Your letter grade will be determined according the following grading scale: A: 88–100, B: 76–87, C: 64–75, D: 52–63, F: 0–51.

**Withdrawal:** 10/9 is the last day to withdraw from the course with a grade of W.

**Important policies:** Please carefully review the information at

<https://www.westga.edu/administration/vpaa/common-language-course-syllabi.php>

It contains important material pertaining to your rights and responsibilities in this class, including the university's honor code. *Any student who violates the University of West Georgia Honor Code will receive an F for the course.*

**Cell Phones:** Cell phones should be silenced and put away during class.

**Learning Outcomes:** The student will be able to

1. Use properties of the real numbers to prove theorems about their structure.
2. Use the definition of limit to prove the convergence of sequences, series, and functions.
3. Use the definition of continuity to establish important properties of continuous functions.
4. Use the definition of differentiability to establish important properties of differentiable functions.
5. Use the definition of the Riemann integral to establish important properties of integrals.