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MATH 1413 – Survey of Calculus
Fall 2019

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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 2:00–3:15 (Boyd 301).

Textbook: *Calculus and Its Applications, 11th ed* by Bittenger, Ellenbogen, and Surgent.

Course Description: Rates of change, the derivative, techniques of differentiation, max-min problems, integration, the Fundamental Theorem of Calculus. Applications to problems in business, economics, and the physical sciences.

Homework: I will assign homework exercises after each section. These problems will not be graded, but you may be quizzed on them. I will allow some time during class to discuss the problems and I encourage you to use my office hours if you have any questions about them.

Tests and Quizzes: There will be four one-hour tests worth 80 points each. (Test dates: 9/9, 9/30, 10/21, 11/11). There will be twelve 20-minute quizzes worth 25 points each. Quizzes will be held every Monday that there is not a test (exceptions - Wednesday after Labor Day and Wednesday 12/4). No electronic devices (cell phones, ipods, etc.), except for a scientific calculator, may be used during tests or quizzes.

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

Math Tutoring Center: One resource for assistance for this class is the Math Tutoring Center (205 Boyd). You can find more information (including hours of operation) on the math department's website.

Final: There will be a *cumulative,* in-class final exam worth 160 points 2:00–4:00 on 12/9.

Grading: Your numerical grade will be your total points (on tests, quizzes, 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

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

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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 should be silenced and put away during class.

Learning Outcomes: The student will be able to

1. Compute and interpret average and instantaneous rates of change, both algebraically and graphically.
2. Use the limit definition of the derivative to compute derivatives
3. Apply rules of differentiation to compute derivatives
4. Use dervatives in graph-sketching
5. Apply calculus to related-rate problems and max-min problems
6. Interpret definite integrals in terms of areas bounded by functions
7. Compute definite and indefinite integrals using the Fundamental Theorem of Calculus