

Mathematics 2413: Calculus I, Section 003 Spring 2024

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Class Schedule: Class meets MWF at 10:30-11:45 in RBN 4025.

Course Website: You MUST activate your Canvas account. To do so, go to <https://uttyler.edu/canvas>. This is also the address to login. If you are registered in the course, you already have access to the course. All important documents will be posted on Canvas.

Office Hours: 2:30-3:30 MWF and by appointment arranged by email.

Required Text: *Calculus Volume 1* from OpenStax (Digital ISBN: 1947172069). This is an open-access textbook, meaning it is freely available at the following link: <https://openstax.org/details/books/calculus-volume-1>. You can read the book online, or download the PDF, iBooks, or Kindle versions of it. If you prefer to have a print copy, you can purchase one. At the OpenStax website above, there is a link to order a print copy.

Course Description: A study of functions, limits, continuity, differentiation, applications of the derivative, the definite and indefinite integral, and applications of integration.

Course Prerequisites: You can satisfy any one of the following prerequisites:

1. Grade of C or better in a college trigonometry course (such as MATH 1316)
2. Grade of C or better in a college precalculus course (such as MATH 2312)
3. Score of 710 or higher on the SAT Math section
4. Score of 27 or higher on the ACT Math section
5. Satisfactory score on the math placement test given by the UT Tyler Testing Center

Outline: We will cover Sections 1 through 5 in the textbook.

Student Learning Objectives: Upon completion of the course, students should be able to do the following:

1. Discuss the solution to the tangent and area problems involving limits, derivatives, and integrals.
2. Use graphs of algebraic and transcendental functions to determine limits, continuity, and differentiability at a point.
3. Determine whether a function is continuous and/or differentiable at a point using limits.
4. Apply differentiation rules to differentiate algebraic and transcendental functions.
5. Choose appropriate calculus concepts and techniques to provide mathematical models of real-world situations and determine solutions to applied problems.
6. Compute definite integrals using the Fundamental Theorem of Calculus.
7. Recognize and discuss the relationship between derivatives and integrals using the Fundamental Theorem of Calculus.

Grading: To assign your grade, I will average your homework, the 2 midterms, and the final as follows.

Homework: 20%

Quizzes: 15%

Midterms: 20% each

Final Exam: 25%

Getting an A requires at least a 90% average, B 80%, C 70%, and D 60%. Anything lower is an F.

Homework: Homework will be assigned on Canvas at the end of each class period. You will have one week to complete each assignment. If you finish an assignment late, you will receive a 10% penalty for each day after the due date. If you have a scheduling conflict and cannot turn it in on time, please inform me beforehand.

Quizzes: At the start of class each Friday, we will have a 10-minute quiz on what we covered the previous week. To determine your quiz grade, I will drop your lowest two quiz grades and average the rest.

Exams: On February 23 and March 28, we will have two midterms.

Calculators and cell phones will not be allowed on the quizzes, midterms, or final exam. If you are unable to take a midterm or the final at the given date, please inform me at least one week in advance. If it is for a UT Tyler obligation or a religious observation, I will grant it.

Final Exam: The final exam is currently scheduled for May 1 from 12:30 to 2:30 in RBN 4025.

Cell Phones: Cell phones are not permitted in class. Please silence them beforehand.

Academic Integrity: Your work must be your own. Violations will be processed according to the established guidelines of the department, college, and university. Violations of academic integrity include, but are not limited to, cheating, fabrication, or plagiarizing. A range of academic sanctions may be taken against a student who engages in academic dishonesty. Below are ideas related to academic integrity.

Resources you are encouraged to utilize in this course include the textbook, assigned and unassigned problems, notes from class, the Math Learning Center, your instructor, and the other students (though your work must ultimately be your own). E-mail is the best way to contact me outside of class and office hours.

While the internet is a valuable resource, using it to unethically acquire answers is considered a violation of academic integrity and processed accordingly. Similarly, copying answers from other students' assignments, past and present, violates the idea that your work must be your own.

Cheating is a very serious issue and can result in disciplinary action. While you may collaborate with your peers, you cannot copy their work.

University Policies: January 29 is this semester's Census Date, the deadline for all registrations, schedule changes, and section changes. For university policies concerning Students' Rights and Responsibilities, Grade Replacement/Forgiveness, State-Mandated Course Drop Policy, Disability Services, Student Absence due to Religious Observance, Absence for University-Sponsored Events and Activities, Social Security, and FERPA Statement, please see <http://www.uttyler.edu/academicaffairs/files/syllabuspolicy.pdf>.

ADA Compliance: If you have a disability, including a learning disability, for

which you request disability support services/accommodation(s), please contact the Office of Student Accessibility and Resources so that the appropriate arrangements may be made. In accordance with federal law, a student requesting disability support services/accommodation(s) must provide documentation of his/her disability to the Disability Support Services counselor. For more information, call or visit the Office of Student Accessibility and Resources located in the University Center, Room 3150. The telephone number is 903-566-7079. Additional information may also be obtained at the following site:

<https://uttyler.edu/disability-services/?r=/disabilityservices>.