MATH 1426 Representative Syllabus

Instructor Information

This is an example of a syllabus that is typical for the class. An official syllabus will be provided by the faculty member teaching the specific section of the course for which students have enrolled.

Course Information

Section Information

[SAMPLE]

Course Description

Course Title: Calculus I

Concepts of limit, continuity, differentiation and integration; applications of these concepts.

Prerequisites: Prerequisite: A qualifying score on the Math Placement Test (MPT) or ALEKS PPL is required to register for this course, or student group.

Time and Place of Class Meetings

Lectures [SAMPLE]

Labs [SAMPLE]

Labs [SAMPLE]

This course operates on Central Time. All times listed for class meeting times, exams, and assignment deadlines are in Central Time (CT).

This course is designated ON-CAMPUS, which means the (majority of) course instruction, exams and projects are delivered on-campus or at designated instructional sites, in-person.

Classroom/Lecture Recording Policy

Faculty maintain the academic right to determine whether students are permitted to record classroom and online lectures. Recordings of classroom lectures, if permitted by the instructor or pursuant to an ADA accommodation, may only be used for academic purposes related to the specific course. They may not be used for commercial purposes or shared with non-course participants except in connection with a legal proceeding.

Recording of classroom and online lectures in this course is allowed.

Student Learning Outcomes

By the end of this course, you will be able to:

1. Evaluate limits of functions using algebraic methods and by analyzing graphs.
2. Justify continuity of functions at points and on intervals.

3. Find derivatives using the definition of the derivative and derivative rules and determine points of non-differentiability.
4. Model real-world scenarios and analyze position, velocity, speed, and acceleration functions.
5. Apply derivative rules to find the derivatives of product, quotient, trigonometric, logarithmic, exponential, and composite functions.
6. Formulate equations and apply implicit differentiation to solve related rates problems.
7. Apply the Mean Value Theorem and Rolle's Theorem to applicable functions on specified closed intervals.
8. Graph functions accurately using critical points, extrema, inflection points, intervals of increase and decrease, and intervals of concavity.
9. Create objective functions derived from real-world scenarios and solve optimization problems.
10. Estimate function values near points of tangency using linearization and differentials.
11. Analyze indeterminate forms and apply L'Hopital's Rule to evaluate limits.
12. Write Riemann Sums to approximate definite integrals and regions bounded by functions.
13. Express definite integrals as limits of Riemann Sums and evaluate integrals using the definition of the definite integral and the Fundamental Theorem of Calculus.
14. Use the substitution rule for integrals to find antiderivatives.
15. Create and solve definite and indefinite integrals modeling real-world scenarios and interpret them graphically.
16. Create definite integrals describing the exact area of irregular regions bounded by functions.

Course Materials & Technology

Textbook Information

This course is participating in a program to provide digital course materials on or before the first day of class at a reduced cost. The cost for these materials will be automatically charged to your UTA student account and you'll have access to the materials through Canvas. Course fees are associated with course registration.

Digital Access (Required Course Materials): Access to Knewton Alta for homework and other digital materials is included in the $70 fee. Every student has full access to course materials through Canvas as soon as the course is available, so you can start working on your course right away. Knewton Alta is designed to enrich student success by providing instant feedback on your assignments plus on-demand access to problem examples, tutorials, and more.

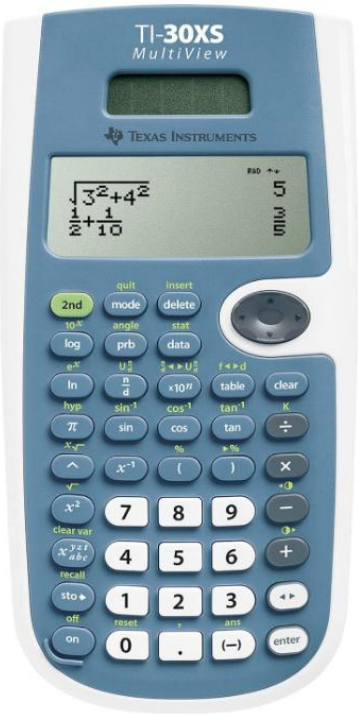
Knewton Alta follows closely the OpenStax book Calculus Volume 1 which may be downloaded for free.

For more information about this program, please see the Course Resources page in your Canvas course and then for further questions, contact your campus bookstore at uta@bkstr.com or 817-272-2785.

Technology & Equipment Requirements

Students will need to access Teams and Knewton Alta (Homework) throughout the semester.

The ONLY calculators allowed for Exam 1, Exam 2 and the Final Exam are TI-30XIIS, TI-30XIIB, TI-30XA, and TI-30XS. *For labs the same calculators are allowed*. The calculators are pictured below (the XIIB looks just like the XIIS but is not solar).



Visit the OIT Services page for a list of Applications and Software available through UTA.

Visit the UTA Libraries Technology page for a list of items that can be checked out or used at the library.

Assignments & Exams

Exam 1 (20% of total course grade)

Friday, September 19th, 2025, from 6-8 pm

Multiple Choice and Show Work questions

Exam 2 (20% of total course grade)

Friday, October 17th, 2025, from 6-8 pm

Multiple Choice and Show Work questions

Final Exam (30% of total course grade)

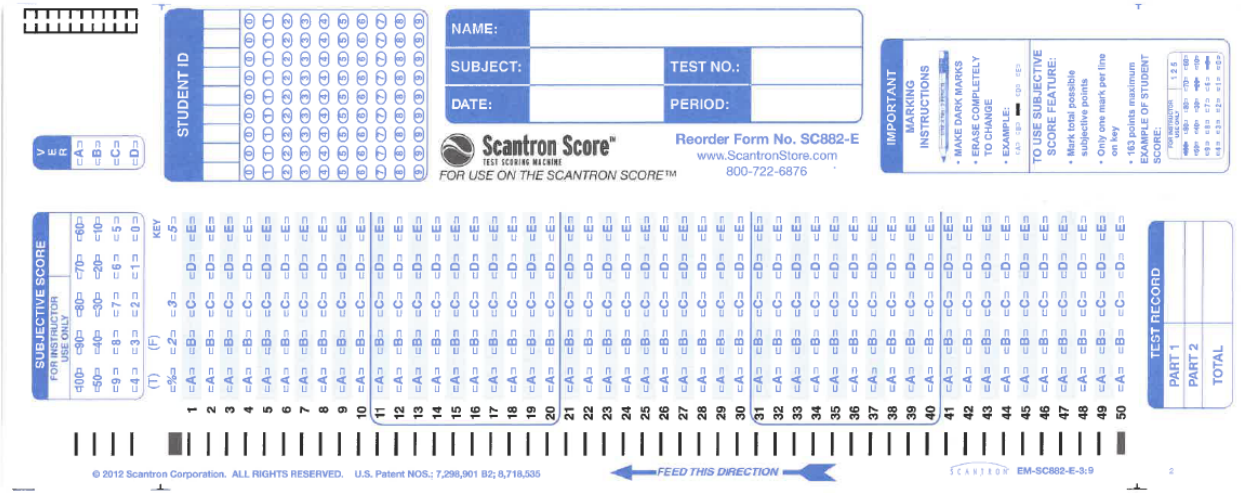
Saturday, December 6th, 2025, from 12:30-3 pm

Multiple Choice and Show Work questions

Lab (30% of total course grade)

Lab Assignments – 12%, Quizzes – 5%, On-line Homework – 8%, Lecture Attendance – 2%, Signature Assignment – 3%

Scantron SC882-E is required for Exam 1, Exam 2 and Final Exam. It is pictured below and must have the Version A/B/C/D in the upper corner. They can typically be purchased at the campus bookstore or certain vending machines on campus.



Additional Course Policies (Exam Replacement/Academic Integrity)

A student's Final Exam score may be used to replace one previous exam score, either Exam 1 or Exam 2.

A student who misses Exam 1 or Exam 2 for any unapproved reason (e.g. taking the wrong exam on exam day, no show) will receive a 0 score. The Final Exam score may be used to replace this score.

Any student who does not take the Final Exam cannot receive a grade higher than F in the course.

At instructor's and/or coordinator's discretion, a student who violates academic integrity during any exam or quiz will be reported to the Office of Student Conduct and a 0 (or reduced score) on the assignment will be the suggested penalty. The student's final course grade may be lowered as well.

Any student who earns a 0 score (or reduced score) on Exam 1 or Exam 2 due to academic integrity violation will not have the 0 score (or reduced score) replaced by the Final Exam score at the end of the semester.

Grading Information

Assignments	Values (**points**)
Quizzes	5 pts
Labs	12 pts
Homework	8 pts
Signature Assignment	3 pts
Lecture Attendance	2 pts
Exam 1	20 pts
Exam 2	20 pts
Final Exam	30 pts
	Total: 100 points

Students are expected to track their performance throughout the semester, which Canvas facilitates, and seek guidance from available sources, including the instructor, if their performance drops below satisfactory levels. Refer to the Student Support Services section below.

Final Grade Calculations

Earned **points**	Letter Grade
90-100	A
80-89	B
70-79	C
60-69	D
Below 60	F

Grading Standards

You must earn a letter grade of C or higher to pass this class. Grading rubrics are provided for all assignments in Canvas.

Late Work Policy

Late Work is accepted if documentation is provided (i.e. doctor's note).

Make-Up Exams Policy

If you have a conflict with a scheduled exam due to a school-sponsored or excused event, you MUST have documentation. To request to test on the make-up date because of an approved conflict, please fill out the Departmental Exam Alternate Test Date Request Form by census date [SAMPLE] . If a conflict arises after the census date, you may still complete the request form; however, **delays in submitting a make-up request may mean that your request cannot be approved**.

In cases of illness or emergency, complete the online form AND contact your instructor immediately. Communication must occur before the start of the exam. A request for a rescheduled exam will only be considered in rare, documentable, and verifiable instances. The decision to grant an alternate test date will be at the sole discretion of the course coordinator.

Note that **conflicting work schedules and other personal events are not excusable events**. You must make arrangements in advance for the testing times and plan for the test schedules.

SAR/ATC Accommodations

If you require an accommodation based on disability, I would like to meet with you privately during the first week of the semester to make sure you are appropriately accommodated. Understand that it is the SAR/ATC student who is responsible for setting up their exams at the ATC/SAR center, and at the appropriate times and dates.

Extra Credit Policy

Do not expect any extra credit in Calculus I.

Grade Grievance Policy

Any appeal of a grade in this course must follow the procedures and deadlines for grade-related grievances as published in the current University Catalog: Grades and Grading Policies. If you experience a conflict with your instructor, first try and resolve the matter with your instructor. For issues that remain unresolved after this contact, including grade discrepancies or complaints, a grievance may be filed with the Mathematics Department by completing the departmental Grievance form at https://go.uta.edu/mathgrievance. Students not satisfied with the departmental decision may appeal to the College of Science. It is imperative for students to follow the proper procedure for their grievances to be reviewed.

Course & University Policies

Attendance Policy

Students should review the University Class Attendance Policies on the Class Attendance Policies page. The following attendance policy will be applied in this course.

I will take attendance during lectures either electronically (Attendance+) or using sign-in sheets, and students will receive no credit for lab period assignments (e.g. recitation quizzes and lab assignment activities) if they are absent from them. A student will receive no credit for a lab session they do not attend. To further incentivize lecture attendance, the following incentives shall be offered to students: Any student who attends at least 80% of lectures will have their lowest quiz score dropped at the end of the semester.

Any student found entering an attendance code when not in attendance will be reported to the Office of Student Conduct and the suggested penalty may be to have their semester attendance (lecture participation) score lowered to 0. Instructors have discretion to assign further penalties.

Institutional Policies

UTA students should review the University Catalog and the Syllabus Institutional Policies page for institutional policies and contact the specific office with any questions. The institutional information includes the following policies, among others:

- Drop Policy
- Disability Accommodations
- Academic Integrity

- Electronic Communication

UTA Honor Code

UTA students are expected to adhere to and observe standards of conduct compatible with the University's functions as an educational institution and live by the University of Texas at Arlington's Honor Code. It is the policy of The University of Texas at Arlington to uphold and support standards of personal honesty and integrity for all students consistent with the goals of a community of scholars and students seeking knowledge and responsibility.

Student Support Services

Student Services Page

The Student Services page provides links to many resources available to UTA students, including:

- Academic Success
- Counseling and Psychological Services (CAPS)
- Health Services
- Students with Disabilities
- Veteran Services

Students are also encouraged to check out Career Center resources to enhance their career-readiness, find student employment, search for internships, and more. We encourage Major Exploration and the use of Experiential Major Maps to keep students on track for graduation. Refer to the Graduation Help Desk for more details.

Online Academic Success Guide

Visit the Online Academic Success Guide to explore a list of helpful tips and resources to help you succeed in your online journey.

Course Schedule

Dates	Topics	Assignments Due
[TBD]	Idea of Limits (and Lab Precalculus Review)	HW, Lab, Quiz
	Intuitive Definition of Limit	HW
	Techniques for Computing Limits	HW, Lab, Quiz
	Infinite Limits	HW
	Limits at Infinity	HW
	Continuity	HW, Lab, Quiz
	Introduction to Derivatives	HW, Lab, Quiz
	The Derivative as a Function	HW
	Rules of Differentiation	HW
	Extensions of the Power Rule	HW
	Derivatives as Rates of Change (Exam 2 material)	HW, Lab, Quiz
	Product and Quotient Rules (Exam 2 material)	HW
	Review for Exam #1	
	Exam #1	

Dates	Topics	Assignments Due
	Derivatives of Trigonometric Functions	HW
	Chain Rule	HW, Lab, Quiz
	Implicit Differentiation	HW
	Derivatives of Logarithmic and Exponential Functions	HW
	Derivatives of Inverse Trigonometric Functions	HW
	Related Rates	HW, Lab, Quiz
	Maxima and Minima	HW
	Graphing Functions	HW
	Review for Exam #2	
	Exam #2	
	Optimization Problems	HW, Lab, Quiz
	Linear Approximation and Differentials	HW, Lab, Quiz
	Mean Value Theorem	HW
	L'Hopital's Rule	HW, Lab, Quiz
	Antiderivatives	HW
	Approximating Areas Under Curves	HW
	Definite Integrals	HW, Lab, Quiz
	Fundamental Theorem of Calculus	HW
	Substitution Rule	HW, Lab, Quiz
	Velocity and Net Change	HW
	Regions Between Curves	HW
	Numerical Integration…if time permits	HW
	Review for Final Exam	
	Final Exam	

As the instructor for this course, I reserve the right to adjust this syllabus and schedule in any way that serves the educational needs of the students enrolled in this course.
- [SAMPLE]