

Calculus 1

MAT 1214.009

Syllabus, Fall 2020, University of Texas at San Antonio

Instructor: Tong Wu
Time & Place: 12:00–12:50 PM on TWRP via Blackboard Collaborate Ultra
Office Hours: 3:00–4:00 PM or by appointment.
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E-mail: tong.wu@utsa.edu

*The course syllabus is a general plan for the course;
deviations announced to the class by the instructor may be necessary.*

Communication: There are several ways you can communicate with me:

- 1 Email me directly from your own email account and I aim to reply your email within 24 hours (if not much sooner). Note that I cannot communicate anything about grades through email.
- 2 Come to my Zoom meeting room during my office hours or by appointment. Please make an appointment if you don't want to be interrupted by other students.
- 3 Use the Course Messages tool on Blackboard to send a private message about grades. This communication stays in Blackboard and is the only secure way to discuss your grade. You will have to log in to Blackboard to send and receive these course messages.

Eligibility: You must have the course prerequisites listed below or equivalents. In case of doubt, consult with the instructor.

Test Dates: (subject to change)

EXAM 1:	Friday, September 25, 2020
EXAM 2:	Friday, October 23, 2020
EXAM 3:	Friday, November 20, 2020
FINAL EXAM:	Friday, December 11, 2020

Grading: The final letter grade is determined according to the following scale:

A	= 90–100%,
B	= 80–89%,
C	= 70–79%,
D	= 60–69%,
F	= 0–59%

Prerequisite: MAT 1093 or an equivalent course or satisfactory performance on a placement examination.

Course Description: An introduction to the concepts of limit, continuity and derivative, mean value theorem, and applications of derivatives such as velocity, acceleration, maximization, and curve sketching; introduction to the Riemann integral and the fundamental theorem of calculus. (Credit can be earned for only one of the following: MAT 1214, MAT 1193, or MAT 1194.) May apply toward the Core Curriculum requirement in Mathematics. Generally offered: Fall, Spring, Summer. Course Fees: DL01 \$100; LRC1 \$16; LRS1 \$60; STSI \$28.

Textbook: *Calculus* Volume I, by OpenStax. Available for free at <https://openstax.org/details/books/calculus-volume-1>

Method of Instruction:

- Virtual lectures and discussion time provided using **Blackboard Collaborate Ultra**. Lecture/discussion times are recurring at the scheduled class time. A video tutorial showing how to access Collaborate Ultra and the recorded sessions is available as a demo in the Tutorials folder.
- The Instructor may record meetings of this course. Any recordings will be available to all students registered for this class as they are intended to supplement the classroom experience. Students are expected to follow appropriate University policies and maintain the security of passwords used to access recorded lectures. Unless Student Disability Services has approved the student to record the instruction, students are expressly prohibited from recording any part of this course. Recordings may not be published, reproduced or shared with those not in the class, or uploaded to other online environments except to implement an approved Student Disability Service accommodation. If the instructor or a UTSA office plans any other uses for the recordings, consent of the students identifiable in the recordings is required prior to such use unless an exception is allowed by law.
- Online homework provided through the WeBWorK site. Due dates for online homework assignments can be found next to the assignment within WeBWorK.

Tests and Assignments: WeBWorK assignments: 15% total. Three exams, 20% each. Final Exam: 25%.

Homework: Homework will be completed online using the WebWorK platform.

- You may access the WeBWorK course by following the link provided in your Blackboard course.
- To login to your WeBWorK course type your UTSAID (abc123) in the username field and your UTSA Passphrase in the password field.
- Homework will be assigned as topics are presented during the lecture/discussion time and/or through video lessons posted in the content modules. Due dates will be visible next to the assignment in your WeBWorK course.

Exam Information:

- Midterm exams will consist of a written part and an online part.
 1. The online part will be delivered through WeBWorK. The online exam will have a time limit. Students may open the online exam at any time during the exam period of Friday at 12:01 am - Friday at 11:59 pm (see exam dates above). Once opened, the online exam must be completed and submitted before the time limit expires and before the close date.
 2. The written part of the exam will be delivered through Blackboard in the Exams Folder. The written exams will become available during the exam period starting on Friday at 12:01 am and must be submitted through Blackboard by Friday at 11:59 pm. After 11:59 pm on Friday night, the link to the written exam part will no longer be available.
 3. The online portion of the exams will count as 70% of the total exam grade and the written portion of the exams will count as 30% of the total exam grade.
- The final exam will also consist of a written part and an online part. The final exam will be delivered on Friday, December 11. Both the written part and online part of the Final exam will become available at 12:01 am and will become unavailable at 11:59 pm on that day.
 1. The online part will be delivered through WeBWorK. The online exam will have a time limit that will not exceed 150 minutes. Students may open the online exam at any time during the exam period of Friday, December 11 at 12:01 am. Once opened, the online exam must be completed and submitted before the time limit expires and before the close date of Friday, December 11 at 11:59 pm.
 2. The written part of the exam will be delivered through Blackboard in the Exams Folder. The written exams will become available during the exam period starting on Friday, December 11 at 12:01 am and must be submitted through Blackboard by Friday, December 11 at 11:59 pm. After 11:59 pm on Friday, December 11, the link to the written exam part will no longer be available.
 3. The online portion of the exams will count as 70% of the total exam grade and the written portion of the exams will count as 30% of the total exam grade.
- Under no circumstances are students permitted to utilize an online resource, website, or tutor to find solutions to exam or homework questions.
Academic Integrity: Please see the following webpage under section 203:
<http://www.utsa.edu/infoguide/app>

Expectations: You are expected to attend class and participate in discussions. A student absent from class bears the full responsibility for all subject matter and procedural information discussed in class. During most sessions we will discuss some of the problems assigned during the previous class, so to get the most out of these discussions you should work as many problems as possible *on the day they are assigned*.

Course Schedule: The course topics will be covered according to the following plan.

Lesson	Section	Date	Topics
1	2.2	Week 1	The Limit of a Function
2	2.3	Week 1/2	The Limit Laws
3	2.4	Week 2/3	Continuity
4	4.6	Week 3	Limits at Infinity and Asymptotes
5	3.1	Week 3/4	Defining the Derivative
6	3.2	Week 4	The Derivative as a Function
7	3.3	Week 4/5	Differentiation Rules
8	3.4	Week 5	Derivatives as Rates of Change
9	3.5	Week 5	Derivatives of the Trigonometric Functions
10	3.6	Week 6	The Chain Rule
11	3.7	Week 6	Derivatives of Inverse Functions
12	3.8	Week 6/7	Implicit Differentiation
13	3.9	Week 7	Derivatives of Exponential and Logarithmic Functions
14	4.1	Week 7/8	Related Rates
15	4.2	Week 8	Linear Approximations and Differentials
16	4.3	Week 8/9	Maxima and Minima
17	4.4	Week 9	Mean Value Theorem
18	4.5	Week 9	Derivatives and the Shape of a Graph
19	4.7	Week 10	Applied Optimization Problems
20	4.8	Week 10	LHpitals Rule
21	4.10	Week 11	Antiderivatives
22	5.1	Week 11/12	Approximating Areas
23	5.2	Week 12	The Definite Integral
24	5.3	Week 12/13	The Fundamental Theorem of Calculus
25	5.4	Week 13	Integration Formulas and the Net Change Theorem
26	5.5	Week 14	Substitution Method for Integrals
27	5.6	Week 14/15	Integrals Involving Exponential and Logarithmic Functions
28	5.7	Week 15	Integrals Resulting in Inverse Trigonometric Functions

Common Syllabus Information: <https://provost.utsa.edu/syllabus.html>