

## MATH 1710 Section 160 - Calculus I (Fall 2025 1)

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# MATH 1710.160 CALCULUS I (Fall 2025)

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**Office Location:** GAB 414

**Office Hours:** MW 9-11AM

**Course Meets:** MWF 8-8:50AM

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## Course Description

Calculus I is the study of limits and continuity, derivatives, and integrals. The class will cover differentiation and integration of polynomial, rational, trigonometric, and algebraic functions as well as applications, including slope, velocity, extrema, area, volume, and work, and will provide preparation for students in STEM majors.

## Required Text/Materials

**Cengage WebAssign:** WebAssign is an online course delivery platform accessed directly through Canvas. WebAssign access includes all online homework assignments, the e-text of *Calculus 9<sup>th</sup> Edition*, by James Stewart, and additional learning resources. Use the link in Canvas to register **immediately**. You must register in WebAssign by the 2<sup>nd</sup> class day of the semester.

The textbook is Stewart, James, *Calculus*, 9<sup>th</sup> Edition. It is available online through WebAssign platform.

WebAssign grants a no-cost temporary 14-day access, starting the first day of the course (not the first day you activate). You must purchase your access before the temporary access expires. If you do not make the purchase before the trial period ends, you may lose credit for all work previously completed.

## Grading

Homework (WebAssign) – 15%

Calculus Readiness Assignment – 5%

Quizzes (Recitation) – 20%

3 Midterm Exams – 60% (see the schedule below for dates)

Final Exam – 20% (Monday, December 8, 8-10am in class)

**Late work will not be accepted in this course regardless of the reason.**

## Course Structure

This course will meet in person 3 times per week for lecture and 2 times per week for recitation. There will be regular homework, 3 midterm exams, and quizzes and/or activities during recitation. See the table below for an approximate schedule of material covered.

## Homework

Each week there will be homework on WebAssign for the sections covered that week. The homework will be due by 11:59 PM on Tuesday of the following week. For instance, in week 1 we will cover all of 1.4 and 1.5. Thus, the homework on these sections will need to be completed by Tuesday night during week 2. This is to give ample time and flexibility should the unexpected happen, but ideally you should be

completing the homework as you go through the module during the week. To provide an incentive, you will receive a 5% bonus for any work on the homework completed more than 48 hrs before the deadline. Keep in mind you will have to check WebAssign frequently to keep up with the due dates, there will not be reminders in Canvas. ). Your lowest four (4) homework scores will be dropped.

On the homework you will generally have 10 attempts on each question with some possible exceptions (e.g. multiple choice or true false questions

## Recitation and Quizzes

There will also be a quiz or activity each week in recitation supplementing material covered in class. Your lowest two (2) quiz scores will be dropped.

## Calculus Readiness

During the first three weeks of the semester, you will need to complete a somewhat lengthy review assignment in WebAssign. This assignment goes over the main topics from Precalculus to make sure you are prepared for this (and future classes). You will have 100 attempts on each question, so that you have ample opportunity to review and get it right. This assignment is 5% of your grade.

## Exams

There will be 3 midterm exams administered in person during lecture. There are NO remote/online options for exams.

If you miss an exam, you receive a zero for that exam. There are no make-up exams. However, your lowest exam grade (including a zero from a missed exam) may be replaced by your score on the final exam if it is higher.

## Recitation

The recitation is conducted by TAs. In recitation you will apply what is learned in class. Arguably, you will learn the most during the recitation as you are doing it. The attendance is required. Your recitation work will be collected and graded. The work in recitation is not of typical quizzes. You are free to discuss and compare your answers

with others in class, and ask help from TA. Your work will be graded mostly on how much effort you put into it. Getting the correct answer is nice but not required for full score. It is the work you put in that matters. The TA will grade your work. You will get 5 out of 10 by just showing up.

The TA is there to help you and will answer your questions related to the material but he will not repeat full lectures on a topic.

## Attendance

Attendance is important and required. In this class, this means looking alive in class and working through the examples in lecture and recitation as we go. It is assumed you will do this. The instructor will not repeat whole lectures or offer personal lessons in office hours or email. These venues are for specific questions / problems.

## Course Prerequisites or Other Restrictions

- A grade of C or higher in MATH 1650.
- A willingness to put in several hours of work each week to absorb the material in each module. In math courses, especially this one, the content will build upon itself making it very difficult to catch up if you fall behind.

## Academic Dishonesty

Cheating will not be tolerated. Any student found cheating will receive no credit on the assignment and a report will be filed with the office of academic integrity.

## Course Objectives

Upon successful completion of this course, learners will be able to:

- Develop solutions for tangent and area problems using the concepts of limits, derivatives, and integrals.
- Create graphs of functions considering limits, continuity, and differentiability at a point.

- Determine whether a function is continuous and/or differentiable at a point using limits.
- Use differentiation rules to differentiate functions.
- Identify appropriate calculus concepts and techniques to provide mathematical modules of real-world situations and determine solutions to applied problems.
- Evaluate definite integrals using the Fundamental Theorem of Calculus.
- Articulate the relations between derivatives and integrals using the Fundamental Theorem of Calculus.
- Determine the area between curves using integration techniques.
- Determine the volume generated by rotating a curve about an axis.

## Technical Requirements & Skills

### Minimum Technology Requirements

- Access to a computer, tablet, or laptop that is compatible with all required apps for the course.
- Access to reliable internet.

### Technical Skills & Digital Literacy

- Navigate Canvas and WebAssign
- Scan documents and create pdf files (there are several free scanning apps for phones / tablets like Adobe Scan or Office Lens). Moreover, both the Notes app for iOS and Google Drive app on Android should be built-in and come with scanning functionality:

[Using Notes for iOS](https://support.apple.com/en-us/HT210336) ➞ <https://support.apple.com/en-us/HT210336>


[Using Google Drive on Android](https://support.google.com/drive/answer/3145835?co=GENIE.Platform%3DAndroid&hl=en) ➞


<https://support.google.com/drive/answer/3145835?co=GENIE.Platform%3DAndroid&hl=en>

- Upload documents to Canvas.
- Complete assignments on WebAssign

## Extra Help

Additional help is available through:

**UNT Math Lab:** The Math Lab is a walk-in tutoring lab that provides free math tutoring for students enrolled in an undergraduate College of Science course at UNT. The Math Lab is staffed by mathematics graduate students and undergraduate students with a passion for math. Math Lab tutors answer specific questions, check that you are approaching a concept correctly, work with and offer alternative problems, and help clarify concepts. Check out all that the Math Lab has to offer by stopping by at Sage Hall 130 or checking it out online at [UNT Math Lab](https://learningcenter.unt.edu/math-lab)  [\\_ \(https://learningcenter.unt.edu/math-lab\)\\_](https://learningcenter.unt.edu/math-lab).

**UNT Tutoring Services:** The Learning Center offer a variety of tutoring services designed to help you succeed at UNT. The tutors there answer specific questions, check that you are approaching a concept correctly, work with and offer alternative problems, and help clarify concepts. Please note, The Learning Center's Tutoring Services will not work on homework or assignment problems for you, check assignment answers, assist with take-home quizzes or essays, or repeat class lectures. Schedule an in-person or online appointment with a Lead Tutor who will help you navigate course content. For more information check [UNT Tutoring Services](https://learningcenter.unt.edu/tutoring)  [\\_ \(https://learningcenter.unt.edu/tutoring\)\\_](https://learningcenter.unt.edu/tutoring).

## Schedule

*I reserve the right to change this schedule as necessary throughout the semester. You are still responsible for being aware of any changes I announce in class even if you were not present.*

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
8/18	8/19	8/20	8/21	8/22

Introduction	1.4 Cont'd	1.5 Limits
1.4 Tangents and Velocity	1.5 Limits	1.6 Calculating Limits
		8/29
		2.1 Definition of Derivative / Rates of Change
8/26		
8/25	8/27	
1.6 Calculating Limits	1.8 Continuity	8/28
		Day before last day to drop without W
9/1	9/2	9/5
Labor Day – No class	9/3	2.2 Derivative as a Function
	2.1 Cont'd	9/4
	2.2 Derivative as a Function	2.3 Derivative Rules

9/8

9/10

9/12

2.3 Cont'd

9/9

2.4 Derivatives  
of Trig  
Functions

9/11

2.5 The Chain  
Rule

9/15

2.6 Implicit  
Differentiation

9/17

9/19

9/16

2.7 Rates of  
Change in the  
Sciences

9/18

**Exam 1 (1.4-  
1.8; 2.1-2.5)**

9/22

2.8 Related  
Rates

9/24

9/26

9/23

2.8 Related  
Rates

2.9 Cont'd

2.9 Differentials 9/25  
/ Linear  
Approximation  
(time  
permitting)

9/25

3.1 Maximum  
and Minimum  
Values

**Last day to  
change to  
pass/no pass**



9/29

3.1 Cont'd

9/30

10/1

3.2 The Mean  
Value Theorem

10/2

10/3

3.2 Cont'd

3.3 The Shape  
of Graphs

10/6

3.3 Cont'd

10/7

10/8

3.3 Cont'd  
3.4 Limits at  
Infinity

10/9

10/10

3.4 Limits at  
Infinity

10/13

3.5 Curve  
Sketching

10/14

10/15

3.5 Cont'd  
3.7  
Optimization

10/16

10/17

3.7 Cont'd

10/20

3.8 Newton's  
Method (time  
permitting)

10/21

10/22

3.9  
Antiderivatives

10/23

10/24

**Exam 2 (2.6-  
3.5)**

3.9

Antiderivatives

10/27

4.1 Areas and  
Distances  
(Riemann  
Sums) 10/28

10/29

4.1 Cont'd 10/30  
4.2 Definite  
Integrals

10/31

4.2 Cont'd

11/3

4.3  
Fundamental  
Theorem of  
Calculus 11/4

11/5

4.4 Indefinite  
Integrals and  
Net Change 11/6

11/7

4.5 Substitution  
**Last day to  
drop with  
a grade of W**

11/10

4.5  
Substitution 11/11

11/12

5.1 Area  
Between  
Curves 11/13

11/14

5.2 Volumes

11/17

11/19

11/21

5.2 Volumes

11/18

**Exam 3 (3.7 – 4.5)**

11/20

5.3 Cylindrical Shells

11/24

11/25

11/26

11/27

11/28

**Thanksgiving Break****Thanksgiving Break****Thanksgiving Break****Thanksgiving Break****Thanksgiving Break**

12/1

5.3 Cylindrical Shells

12/2

12/3

Wrap Up / Review

12/4

Wrap Up / Review

**Last day of class**

12/5



**Reading day  
(No class)**

UNT Policies



Academic Integrity Policy

According to UNT Policy 06.003, Student Academic Integrity, academic dishonesty occurs when students engage in behaviors including, but not limited to cheating, fabrication, facilitating academic dishonesty, forgery, plagiarism, and sabotage. A finding of academic dishonesty may result in a range of academic penalties or sanctions ranging from admonition to expulsion from the University.








ADA Policy

UNT makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide a student with an accommodation letter to be delivered to faculty to begin a private discussion regarding one’s specific course needs. Students may request accommodations at any time, however, ODA notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information see the [ODA website](https://disability.unt.edu/)  [\(https://disability.unt.edu/\)](https://disability.unt.edu/) [\(https://disability.unt.edu/](https://disability.unt.edu/)  [\(https://disability.unt.edu/\)](https://disability.unt.edu/)).







Course Summary:

Date	Details	Due
Tue Aug 19, 2025	 <a href="#">Week 1 Tuesday</a>	due by 11:59pm <a href="https://unt.instructure.com/courses/129059/assignments/2781967">https://unt.instructure.com/courses/129059/assignments/2781967</a>
Thu Aug 21, 2025	 <a href="#">Week 1 Thursday</a>	due by 11:59pm <a href="https://unt.instructure.com/courses/129059/assignments/2781970">https://unt.instructure.com/courses/129059/assignments/2781970</a>


Date	Details	Due
Tue Aug 26, 2025	 <b><u>1.4 The Tangent and Velocity Problems</u></b>	due by 10:59pm ( <a href="https://unt.instructure.com/courses/129059/assignments/2780898">https://unt.instructure.com/courses/129059/assignments/2780898</a> )
	 <b><u>1.5 The Limit of a Function</u></b>	due by 10:59pm ( <a href="https://unt.instructure.com/courses/129059/assignments/2780899">https://unt.instructure.com/courses/129059/assignments/2780899</a> )
	 <b><u>Getting Familiar with WA</u></b>	due by 10:59pm ( <a href="https://unt.instructure.com/courses/129059/assignments/2780900">https://unt.instructure.com/courses/129059/assignments/2780900</a> )
	 <b><u>Week 2 Tuesday</u></b>	due by 11:59pm ( <a href="https://unt.instructure.com/courses/129059/assignments/2782012">https://unt.instructure.com/courses/129059/assignments/2782012</a> )
Thu Aug 28, 2025	 <b><u>Week 2 Thursday</u></b>	due by 11:59pm ( <a href="https://unt.instructure.com/courses/129059/assignments/2782016">https://unt.instructure.com/courses/129059/assignments/2782016</a> )
Fri Aug 29, 2025	 <b><u>Calculus Readiness</u></b>	due by 10:59pm ( <a href="https://unt.instructure.com/courses/129059/assignments/2780901">https://unt.instructure.com/courses/129059/assignments/2780901</a> )
Tue Sep 2, 2025	 <b><u>1.6 Calculating Limits Using Limit Laws</u></b>	due by 10:59pm ( <a href="https://unt.instructure.com/courses/129059/assignments/2780902">https://unt.instructure.com/courses/129059/assignments/2780902</a> )
	 <b><u>1.8 Continuity</u></b>	due by 10:59pm ( <a href="https://unt.instructure.com/courses/129059/assignments/2780903">https://unt.instructure.com/courses/129059/assignments/2780903</a> )
	 <b><u>Week 3 Tuesday</u></b>	due by 11:59pm ( <a href="https://unt.instructure.com/courses/129059/assignments/2782065">https://unt.instructure.com/courses/129059/assignments/2782065</a> )
Thu Sep 4, 2025	 <b><u>Week 3 Thursday</u></b>	due by 11:59pm ( <a href="https://unt.instructure.com/courses/129059/assignments/2782066">https://unt.instructure.com/courses/129059/assignments/2782066</a> )
Tue Sep 9, 2025	 <b><u>2.1 Derivative and the Rate of Change</u></b>	due by 10:59pm ( <a href="https://unt.instructure.com/courses/129059/assignments/2780905">https://unt.instructure.com/courses/129059/assignments/2780905</a> )

Date	Details	Due
	 <b><u>2.2 The Derivative as a Function</u></b>	due by 10:59pm ( <a href="https://unt.instructure.com/courses/129059/assignments/2780906">https://unt.instructure.com/courses/129059/assignments/2780906</a> )
	 <b><u>Week 4 Tuesday</u></b>	due by 11:59pm ( <a href="https://unt.instructure.com/courses/129059/assignments/2782068">https://unt.instructure.com/courses/129059/assignments/2782068</a> )
Thu Sep 11, 2025	 <b><u>Week 4 Thursday</u></b>	due by 11:59pm ( <a href="https://unt.instructure.com/courses/129059/assignments/2782069">https://unt.instructure.com/courses/129059/assignments/2782069</a> )
	 <b><u>2.3 Differentiation Formulas</u></b>	due by 10:59pm ( <a href="https://unt.instructure.com/courses/129059/assignments/2780908">https://unt.instructure.com/courses/129059/assignments/2780908</a> )
Tue Sep 16, 2025	 <b><u>2.4 Derivatives of Trigonometric Functions</u></b>	due by 10:59pm ( <a href="https://unt.instructure.com/courses/129059/assignments/2780909">https://unt.instructure.com/courses/129059/assignments/2780909</a> )
	 <b><u>Week 5 Tuesday</u></b>	due by 11:59pm ( <a href="https://unt.instructure.com/courses/129059/assignments/2782072">https://unt.instructure.com/courses/129059/assignments/2782072</a> )
Thu Sep 18, 2025	 <b><u>Week 5 Thursday</u></b>	due by 11:59pm ( <a href="https://unt.instructure.com/courses/129059/assignments/2782088">https://unt.instructure.com/courses/129059/assignments/2782088</a> )
Fri Sep 19, 2025	 <b><u>Midterm exam 1</u></b>	due by 8am ( <a href="https://unt.instructure.com/courses/129059/assignments/2781711">https://unt.instructure.com/courses/129059/assignments/2781711</a> )
	 <b><u>2.5 The Chain Rule</u></b>	due by 10:59pm ( <a href="https://unt.instructure.com/courses/129059/assignments/2780910">https://unt.instructure.com/courses/129059/assignments/2780910</a> )
Tue Sep 23, 2025	 <b><u>2.6 Implicit Differentiation</u></b>	due by 10:59pm ( <a href="https://unt.instructure.com/courses/129059/assignments/2780911">https://unt.instructure.com/courses/129059/assignments/2780911</a> )
	 <b><u>2.7 Rates of Change in Natural &amp; Social Sciences</u></b>	due by 10:59pm ( <a href="https://unt.instructure.com/courses/129059/assignments/2780912">https://unt.instructure.com/courses/129059/assignments/2780912</a> )

Date	Details	Due
	 <b><u>2.8 Related Rates</u></b> ( <a href="https://unt.instructure.com/courses/129059/assignments/2780913">https://unt.instructure.com/courses/129059/assignments/2780913</a> )	due by 10:59pm
Tue Sep 30, 2025	 <b><u>2.9 Linear Approximation and Differentials</u></b> ( <a href="https://unt.instructure.com/courses/129059/assignments/2780914">https://unt.instructure.com/courses/129059/assignments/2780914</a> )	due by 10:59pm
	 <b><u>3.1 Maximum and Minimum Values</u></b> ( <a href="https://unt.instructure.com/courses/129059/assignments/2780915">https://unt.instructure.com/courses/129059/assignments/2780915</a> )	due by 10:59pm
Tue Oct 7, 2025	 <b><u>3.2 The Mean Value Theorem</u></b> ( <a href="https://unt.instructure.com/courses/129059/assignments/2780916">https://unt.instructure.com/courses/129059/assignments/2780916</a> )	due by 10:59pm
	 <b><u>3.3 How Derivatives Affect the Shape of a Graph</u></b> ( <a href="https://unt.instructure.com/courses/129059/assignments/2780917">https://unt.instructure.com/courses/129059/assignments/2780917</a> )	due by 10:59pm
Tue Oct 21, 2025	 <b><u>3.4 Limits at Infinity; Horizontal Asymptotes</u></b> ( <a href="https://unt.instructure.com/courses/129059/assignments/2780918">https://unt.instructure.com/courses/129059/assignments/2780918</a> )	due by 10:59pm
Fri Oct 24, 2025	 <b><u>Midterm exam 2</u></b> ( <a href="https://unt.instructure.com/courses/129059/assignments/2781869">https://unt.instructure.com/courses/129059/assignments/2781869</a> )	due by 8am
	 <b><u>3.5 Summary of Curve Sketching</u></b> ( <a href="https://unt.instructure.com/courses/129059/assignments/2780919">https://unt.instructure.com/courses/129059/assignments/2780919</a> )	due by 10:59pm
Tue Oct 28, 2025	 <b><u>3.7 Optimization Problems</u></b> ( <a href="https://unt.instructure.com/courses/129059/assignments/2780920">https://unt.instructure.com/courses/129059/assignments/2780920</a> )	due by 10:59pm
Tue Nov 4, 2025	 <b><u>3.8 Newton's Method</u></b> ( <a href="https://unt.instructure.com/courses/129059/assignments/2780921">https://unt.instructure.com/courses/129059/assignments/2780921</a> )	due by 10:59pm

Date	Details	Due
Tue Nov 11, 2025	 <b><u>3.9 Antiderivatives</u></b> ( <a href="https://unt.instructure.com/courses/129059/assignments/2780922">https://unt.instructure.com/courses/129059/assignments/2780922</a> )	due by 10:59pm
	 <b><u>4.1 Areas and Distances</u></b> ( <a href="https://unt.instructure.com/courses/129059/assignments/2780923">https://unt.instructure.com/courses/129059/assignments/2780923</a> )	due by 10:59pm
	 <b><u>4.2 The Definite Integral</u></b> ( <a href="https://unt.instructure.com/courses/129059/assignments/2780924">https://unt.instructure.com/courses/129059/assignments/2780924</a> )	due by 10:59pm
Tue Nov 18, 2025	 <b><u>4.3 The Fundamental Theorem of Calculus</u></b> ( <a href="https://unt.instructure.com/courses/129059/assignments/2780925">https://unt.instructure.com/courses/129059/assignments/2780925</a> )	due by 10:59pm
	 <b><u>4.4 Indefinite Integrals and the Net Change Thm</u></b> ( <a href="https://unt.instructure.com/courses/129059/assignments/2780926">https://unt.instructure.com/courses/129059/assignments/2780926</a> )	due by 10:59pm
Wed Nov 19, 2025	 <b><u>Midterm exam 3</u></b> ( <a href="https://unt.instructure.com/courses/129059/assignments/2781885">https://unt.instructure.com/courses/129059/assignments/2781885</a> )	due by 8am
Tue Nov 25, 2025	 <b><u>4.5 The Substitution Rule</u></b> ( <a href="https://unt.instructure.com/courses/129059/assignments/2780927">https://unt.instructure.com/courses/129059/assignments/2780927</a> )	due by 10:59pm
	 <b><u>5.1 Areas Between Curves</u></b> ( <a href="https://unt.instructure.com/courses/129059/assignments/2780928">https://unt.instructure.com/courses/129059/assignments/2780928</a> )	due by 10:59pm
Tue Dec 2, 2025	 <b><u>5.2 Volumes</u></b> ( <a href="https://unt.instructure.com/courses/129059/assignments/2780929">https://unt.instructure.com/courses/129059/assignments/2780929</a> )	due by 10:59pm
	 <b><u>5.3 Volumes by Cylindrical Shells</u></b> ( <a href="https://unt.instructure.com/courses/129059/assignments/2780930">https://unt.instructure.com/courses/129059/assignments/2780930</a> )	due by 10:59pm
	 <b><u>5.5 Average Value of a Function</u></b>	due by 10:59pm



Date	Details	Due
	<a href="https://unt.instructure.com/courses/129059/assignments/2780931">https://unt.instructure.com/courses/129059/assignments/2780931</a>	
Mon Dec 8, 2025	 <b>Final exam</b>	due by 8am
	<a href="https://unt.instructure.com/courses/129059/assignments/2781911">https://unt.instructure.com/courses/129059/assignments/2781911</a>	