

# Calculus II

## Math 1720.110, Spring 2026

**Instructor:** Derek Levinson

**Course website:** <https://unt.instructure.com/courses/138964>

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**Office hours:** Monday and Wednesday 11-12 am in GAB 469 (subject to change)

### Course Description

Calculus II topics are differentiation and integration of exponential, logarithmic and transcendental functions; integration techniques; indeterminate forms; improper integrals; area and arc length in polar coordinates; infinite series; power series; and Taylor's theorem. The study of these techniques provides 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 9th Edition, by James Stewart, and additional learning resources. Use the link in Canvas to register. You must register in WebAssign by the 2nd class day of the semester.

The textbook is Stewart, James, Calculus, 9th Edition. It is available online through the WebAssign platform. WebAssign grants a no-cost temporary 14-day access, starting on 1/9/26. 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.

### Grades

#### Grading scheme:

Homework (WebAssign) – 15%

Quizzes – 15%

Calculus I Review Assignment – 5%

Midterm Exams – 40%

Final Exam – 25%

#### Letter Grades

- A: 90-100% (Outstanding, excellent work. The student performs well above the minimum criteria.)
- B: 80-89% (Good, impressive work. The student performs above the minimum criteria.)
- C: 70-79% (Solid, college-level work. The student meets the criteria of the assignment.)
- D: 60-69% (Below average work. The student fails to meet the minimum criteria.)
- F: 59 and below (Sub-par work. The student fails to complete the assignment.)

## 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, 2 midterm exams, a final exam, and quizzes during recitation.

### 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 Wednesday of the following week. For instance, in week 1 I plan to cover sections 6.1 and 6.2. Thus, the homework on these sections will need to be completed by Wednesday 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 three (3) homework scores will be dropped. On the homework you will generally have 10 attempts on each question with a numerical answer (but you might not get multiple attempts for a multiple-choice question).

**Quizzes:** There will also be a quiz each week on Thursday in recitation covering the material from the prior week (i.e. over the homework you are submitting that week). Your lowest two (2) quiz scores will be dropped.

### Calculus I Review:

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 Calculus I 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 2 midterm exams administered in person during lecture, as well as a final exam. There are NO remote/online options for exams. You will be able to use a formula sheet on exams. If you miss an exam, you receive a zero for that exam. There are no make-up exams, unless you have an excused absence, in which case you should alert me of the conflict in the first 2 weeks of the class. 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.

- Midterm 1: February 23, 10-10:50 am
- Midterm 2: March 27, 10-10:50 am
- Final exam: May 2, 7:30-9:30 am

**Recitation:** The recitations for this course are

Section 111

- Location: CURY 211
- Time: TR 3:30pm-4:20pm
- Instructor: Mahfuz Alom
- Email: mahfuz.alom@unt.edu

### Section 112

- Location: CURY 211
- Time: TR 4:30pm-5:20pm
- Instructor: Daozheng Liu
- Email: daozheng.liu@unt.edu

### Section 113

- Location: PHYS 116
- Time: TR 5:30pm-6:20pm
- Instructor: Daozheng Liu
- Email: daozheng.liu@unt.edu

You will receive additional instruction by the TA in your recitation section. The TA will work additional examples (with student input) and answer homework questions or other questions related to the material. The TA will also administer short quizzes or activities on the material. The TA will not repeat full lectures on a topic.

## Tips to succeed in this course

1. Lecture: There are “student notes” for each topic posted on the course website. These outline what I will cover from each section of the book - in class I will fill in the details and examples. The intention is for you to print these out before class and take notes on them.
2. Reading the textbook: It’s hard for anyone to absorb 50 minutes of brand new material in a row in a lecture. I recommend trying to read the relevant chapter of the book **BEFORE** class. Ambitious students may even try to solve some problems from the “student notes” before class.
3. Homework: This is the most important part of the class. The homework is the *minimum* number of problems you should do - the textbook has plenty of other good problems to try. Here are the steps I would go through on a problem.
  - (a) If the problem asks for a numerical answer, think about what kind of answer would make sense before you start the problem. Will the answer be big/small? positive/negative? close to 1?
  - (b) Try solving it.
  - (c) If you don’t know how to do it, go back and look at the relevant section of the book/class notes and try again. Or try solving a simpler problem.
  - (d) If you still can’t solve it, get help from a peer, myself, or the TA.
  - (e) Think about whether the answer you got makes sense.
4. Quizzes and Exams: The main differences between the homework and exams are you won’t have access to book/notes and you won’t be told which section the problem is from. Try solving some problems under these circumstances as practice. You’ll have an equation

sheet for the midterms and final, but you shouldn't rely on this except to jog your memory.  
Below you'll find a tentative schedule of lectures for the course.

Date	Topic	Section of Textbook	
1/12	Inverse Functions	6.1	
1/14	Inverse Functions/Natural Log	6.1/6.2*	
1/16	Natural Log	6.2*	
1/19	MLK day - no class		
1/21	Exponential Functions	6.3*	
1/23	More on Log and Exponentiation	6.4*	End of Week 2
1/26	More on Log and Exponentiation	6.5	
1/28	Inverse Trig Functions	6.6	
1/30	Inverse Trig Functions/L'Hopital	6.6/6.8	
2/2	L'Hopital	6.8	
2/4	Integration by Parts	7.1	
2/6	Integration by Parts/Trig Integrals	7.1/7.2	End of Week 4
2/9	Trig Integrals	7.2	
2/11	Trig Substitution	7.3	
2/13	Trig Substitution/Integration by Partial Fractions	7.3/7.4	
2/16	Integration by Partial Fractions	7.4	
2/18	Approximate Integration	7.7	
2/20	Catch up/Flex		End of Week 6
2/23	Midterm 1		
2/25	Improper Integrals	7.8	
2/27	Improper Integrals	7.8	
3/2	Parametric Equations	10.1	
3/4	Parametric Equations	10.2	
3/6	Polar Coordinates	10.3	End of Week 8
3/9	Spring break - no class		
3/11	Spring break - no class		
3/13	Spring break - no class		
3/16	Polar Coordinates	10.4	
3/18	Sequences	11.1	
3/20	Sequences/Series	11.1/11.2	End of Week 10
3/23	Series	11.2	
3/25	Catch up/Flex		
3/27	Midterm 2		
3/30	Integral Test	11.3	
4/1	Integral Test/Comparison Test	11.3/11.4	
4/3	Comparison Test	11.4	End of Week 12
4/6	Alternating Series	11.5	
4/8	Alternating Series/Ratio and Root Tests	11.5/11.6	
4/10	Ratio and Root Tests	11.6	
4/13	Power Series	11.8	
4/15	Power Series	11.8	
4/17	Representation of Functions as Power Series	11.9	End of Week 14
4/20	Taylor Series	11.10	
4/22	Taylor Series	11.10	
4/24	Applications of Taylor Series	11.1	
4/27	Catch up/Flex		
4/29	Review		
5/1	Reading Day - no class		End of Week 16
5/2	Final Exam		