

Math 1720.130: Fall 2025

Meets: MWF 9:00-9:50 in General Academic Building, Room 105.

Instructor: [Professor John Quintanilla](#)

Office: General Academic Building, Room 418D

Office Phone: None. Instead, please reach me by e-mail to set up an appointment to chat by Zoom or Microsoft Teams. (The main phone number for the front desk of the Department of Mathematics is 940-565-2155.)

E-mail: John.Quintanilla@unt.edu

Student Hours: This is your chance to ask me questions about anything you'd like. My favorite part about teaching is not lecturing in a big hall but working closely with individual students or small groups to address whatever issues may arise during the semester. Student hours will be conducted in person in my office.

- Tuesdays 11 am-noon and Wednesdays 10-11 am. There will be one exception: on August 19, student hours will be held 2-3 pm and not 11 am-noon.
- If you are unable to make either of these times, you are more than welcome to set up an appointment with me. You are also welcome to visit my office without an appointment; however, there may be times when I am busy and may have to ask you to come at another time.
- Finally, if coming to campus is an issue, you are welcome to visit with me via Zoom. To meet me via Zoom, please first make an appointment with me so that I know to log into Zoom at the appropriate time. The Zoom link for student appointments has been posted in Canvas.

Required Text: Cengage WebAssign: WebAssign is 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 **immediately**. 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 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.

Strongly Recommended: The lecture notes for the semester will be available on Canvas. You are welcome to print these out at home or access them on your laptop/tablet during class. If you have sufficient print credits, you also can print these on campus. For more information about procedures and guidelines regarding the use of printers on campus, please see <http://computerlabs.unt.edu/>.

Technology: You are allowed to use a scientific or basic graphing calculator like a TI-83 or TI-84 for coursework throughout the semester, but make sure you are aware of the correct steps to solving a problem, and not just relying on a calculator for answers.

The use of TI-Nspires, TI 89's, TI 92's or any other utility with alphanumeric/CAS capabilities ARE NOT permitted.

Recitation: The recitation instructors for this course:

- MATH 1720.131, TR 8-8:50 am, Physics Building 112: Julius Ngugi
- MATH 1720.132, TR 9-9:50 am, Matthews Hall 109: Rohan Srivastava
- MATH 1720.133, TR 10-10:50 am, Matthews Hall 109: Rohan Srivastava

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.

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.

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.

Prerequisite: Math 1710 with a grade of C or higher. The prerequisite for this class is serious.

Technical Requirements and 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.
- A scientific or basic graphing calculator (TI-84 or equivalent) is recommended.

Technical Skills & Digital Literacy

- Navigate Canvas and WebAssign
- Complete assignments on WebAssign

Online Course System

The University is committed to providing a reliable online course system to all users. However, part of working in the online environment involves dealing with the inconveniences and frustration that can arise when technology breaks down or does not perform as expected. Here at UNT we have a Student Help Desk that you can contact for help with Canvas or other technology issues.

UIT Help Desk: [UIT Student Help Desk site](https://www.unt.edu/helpdesk)

(<https://www.unt.edu/helpdesk>)

Email: helpdesk@unt.edu

Phone: 940-565-2324

In Person: Sage Hall, Room 130

Walk-In Availability: 8am-9pm

Telephone Availability:

- Sunday: noon-midnight
- Monday-Thursday: 8am-midnight
- Friday: 8am-8pm
- Saturday: 9am-5pm

Laptop Checkout: 8am-7pm

For additional support, visit [Canvas Technical Help](https://community.canvaslms.com/docs/DOC-10554-4212710328) (<https://community.canvaslms.com/docs/DOC-10554-4212710328>)

Grading Policies

Final Exam	16%
Exam 1	16%
Exam 2	16%
Exam 3	16%
Homework (WebAssign)	12%
Quizzes (Recitation)	12%
Precalculus/Calculus I Review Assignment (WebAssign)	12%

Cooperation is encouraged in doing the homework assignments, quizzes, and the Precalculus/Calculus I review assignment. However, **cheating will not be tolerated on the exams**. If you are caught cheating, you will be subject to any penalty the instructor deems appropriate, **up to and including an automatic F for the course**. Furthermore, a report will be filed with the Office of Academic Integrity. Refer to the following university site for the official policy with regards to academic dishonesty: <http://vpaa.unt.edu/academic-integrity.htm>.

In this course, I want you to engage deeply with the materials and develop your own critical thinking and writing skills. For this reason, the use of Generative AI (GenAI) tools like Claude, ChatGPT, and Gemini is not permitted. While these tools can be helpful in some contexts, they do not align with our goal of fostering the development of your independent thinking. Using GenAI to complete any part of an assignment, exam, or coursework will be considered a violation of academic integrity, as it prevents the development of your own skills, and will be addressed according to the [Student Academic Integrity](#) policy.

A	90-100%	Outstanding, excellent work. The student performs well above the minimum criteria.
B	80-89.99%	Good, impressive work. The student performs above the minimum criteria.
C	70-79.99%	Solid, college-level work. The student meets the criteria of the assignment.
D	60-69.99%	Below average work. The student fails to meet the minimum criteria.
F	0-59.99%	Sub-par work. The student fails to complete the assignment.

Beginning on Saturday, November 8, a student may request a grade of "I", incomplete, a non-punitive grade given only if a student (1) is passing, (2) has justifiable reason why the work cannot be completed on schedule; and (3) arranges with the instructor to complete the work. The grade of "I" is designed for students who are unable to complete work in a course but who are currently passing the course. The guidelines are clearly spelled out in the course catalog. Before you ask, you should read these requirements.

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.

It is my experience that students who skip class frequently make poorer grades than students who attend class regularly. You will be responsible for everything that I cover in class, even if you are absent. **In math courses, especially this one, the content will build upon itself making it very difficult to catch up if you fall behind.**

Students are expected to attend class meetings regularly and to abide by the attendance policy established for the course. It is important that you communicate with me prior to being absent, so we can discuss and mitigate the impact of the absence on your attainment of course learning goals. Please inform me if you are unable to attend class meetings, especially in cases of illness.

Exam Policies

- There will be 3 midterm exams administered in class during lecture.
- There are no remote/online options for exams.
- I expect to give exams during the weeks noted in the schedule below. However, these are tentative dates. I will announce the exact date of each exam in class.

- You will be expected to bring to class a calculator (TI-83, TI-84, or equivalent) that can perform the calculations described in class.
 - After exams are returned in class, you have 48 hours to appeal your grade. I will not listen to any appeals after this 48-hour period.
 - Students missing an exam for unauthorized reasons will receive 0 (zero) points on the exam.
 - 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.
 - The Final Examination will be comprehensive in the sense that problems may come from any of the sections that will be covered during the semester.
 - The grade of A signifies *consistent* excellence over the course of the semester. In particular, an A on the final is not equivalent to an A for the course.
 - I reserve the right to test and quiz you on problems which are generalizations of material covered in the class and/or in the text. In short, the problems may not look exactly like the ones in the book.
 - Everything that I say in class is fair game for exam material. You will be responsible for everything unless I advise you to the contrary.
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Homework Policies

- Each week there will be homework on WebAssign for each section covered that week. There may be multiple homework assignments due in a single week.
 - The homework will typically be due by 11:59 PM on Wednesday of the following week. For instance, in week 1 we will cover Sections 6.1 and 6.2. Thus, the homework on this section 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.
 - It's possible that homework will be scheduled for days other than Wednesdays, especially the weeks near exams. Keep in mind you will have to check WebAssign frequently to keep up with the due dates, there will not be reminders in Canvas.
 - To provide an incentive, you will receive a 5% bonus for any work on the homework completed more than 48 hours before the deadline.
 - On the homework you will generally have 10 attempts on each question, with one important exception when we get to Chapter 11.
 - When computing grades, I will drop the **four (4)** lowest homework grades before computing the homework average. Therefore, in principle, you could get a 100% homework score and also not turn in four assignments during the semester. I have this policy in case you get sick, a family emergency arises, etc., during the semester. You will still be responsible for the material in such assignments during the examinations.
 - Because of this policy, I will **not** give extensions on homework assignments, nor will I accept late assignments.
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Quiz Policies

- There will be a quiz or activity each week in recitation covering the material from the prior week (i.e., over the homework you are submitting that week).
 - You are welcome to consult your notes, read your textbook, collaborate with your peers, ask the teaching assistant for help, etc. during the quiz.
 - Your lowest two (2) quiz scores will be dropped.
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Precalculus/Calculus I Prerequisite Review Policies

- During the 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 and Calculus I to make sure you are prepared for this class (and future classes). These topics include:
 - Trigonometric functions
 - Trigonometric identities
 - Solving trigonometric equations
 - Exponential and logarithmic equations
 - Laws of Exponents and Laws of Logarithms
 - Limits
 - Differentiation: Power, Product, Quotient, and Chain Rules
 - Indefinite integrals
 - Definite integrals
 - Integration via u -substitution
- You will have 100 attempts on each question, so that you have ample opportunity to review and get it right.
- As with the normal WebAssign homework, you will receive a 5% bonus for any work on the homework completed more than 48 hours before the deadline.
- This assignment is worth 12% of your course grade.
- The point of this prerequisite review is not to be punitive. It's completely reasonable if you've forgotten about a few concepts from previous courses over the summer. If your memory is rusty, please feel free to reach out for help.

Course Objectives

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

- Compute derivatives and antiderivatives of functions built from the basic transcendental functions.
- Understand and apply exponential models to make predictions.
- Resolve limits in an indeterminate form using L'Hopital's rule in concert with other techniques.
- Apply the integration by parts formula to definite and indefinite integrals.
- Compute definite and indefinite integrals of powers and products of trigonometric functions.
- Apply trigonometric substitution to calculate definite and indefinite integrals.
- Develop a rational function in partial fractions and then find an antiderivative.
- Recognize the appropriate integration technique.
- Recognize improper integrals and determine if they converge.
- Apply the techniques for finding limits of functions to sequences.
- Evaluate the sums of geometric and telescoping series.
- Understand and apply an appropriate test to determine series convergence.
- Distinguish between absolute and conditional convergence.
- Represent functions by power series (including determining radius of convergence).
- Use Taylor polynomials in approximation problems.
- Graph parametric curves and determine the slopes of their tangent lines (including horizontal and vertical tangents).
- Express points and curves in polar coordinates.
- Find tangents to polar curves.
- Determine the area of a region bounded by a polar curve.

Extra Help

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](#).

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](#).

Course Topics

The following chapters and sections of the textbook will be covered according to the projected schedule below. Dates may change as events warrant.

August 18	6.1	Inverse functions	
August 20	6.1 6.2	Inverse functions Natural logarithm	
August 22	6.2 6.3	Natural logarithm Natural exponential function	Last day to add/swap a class.
August 25	6.3 6.4	Natural exponential function General logarithms and exponents	
August 27	6.5	Exponential growth and decay	
August 29	6.6	Inverse trigonometric functions	Last day to drop a course without a W
September 1	NO CLASS	LABOR DAY	
September 3	6.6	Inverse trigonometric functions	
September 5	6.8	L'Hôpital's Rule	
September 8	6.8 7.1	L'Hôpital's Rule Integration by parts	
September 10	7.1	Integration by parts	
September 12	7.2	Trigonometric integrals	
September 15	Chapter 6	EXAM #1	
September 17	7.2 7.3	Trigonometric integrals Trigonometric substitution	
September 19	7.3	Trigonometric substitution	
September 22	7.4	Partial fractions	
September 24	7.4	Partial fractions	
September 26	7.8	Improper integrals	Last day to change to pass/no pass
September 29	7.8 11.1	Improper integrals Sequences	
October 1	11.1 11.2	Sequences Series	
October 3	11.2	Series	
October 6	11.3	Integral test	
October 8	11.3 11.4	Integral test Comparison tests	
October 10	11.4	Comparison tests	

October 13	11.5	Alternating series	
October 15	Chapter 7, Section 11.1, 11.2	EXAM #2	
October 17	11.5	Absolute/conditional convergence	
October 20	11.6	Root/ratio tests	
October 22	11.6 11.8	Root/ratio tests Power series	
October 24	11.8	Power series	
October 27	11.9	Representation by power series	
October 29	11.9	Representation by power series	
October 31	11.10	Taylor series	
November 3	11.10	Taylor series	
November 5	11.10	Taylor series	
November 7	10.1	Parametric equations	Last day to drop a course or all courses with a grade of W
November 10	10.1 10.2	Parametric equations Calculus in parametric equations	
November 12	10.2	Calculus in parametric equations	
November 14	10.3	Polar coordinates	
November 17	10.4	Area in polar coordinates	
November 19	Chapter 11	EXAM #3	
November 21	10.4	Area in polar coordinates	
November 24-28	NO CLASS	THANKSGIVING BREAK	
December 1	Review		
December 3	Review		
December 5	NO CLASS	READING DAY	
December 10, 8-10 am		FINAL EXAM	

Student Responsibilities

- You should read over this syllabus carefully, as I will hold you responsible for the information herein.
- Students will be expected to read the chapters carefully, including the examples in the book.
- Students will be responsible for obtaining any and all handouts. If you are not in class when handouts are given, it is **your** responsibility to obtain copies.
- You should begin working now.** Frequent practice is crucial to the successful completion of a mathematics course. Cramming at the last minute will certainly lead to failure.
- WARNING:** If you are in academic trouble, or are in danger of losing your financial support, or if your parent or guardian is expecting a certain grade at the end of the semester... start working today. I will refuse to listen to any pleas at the end of the semester. You will receive precisely the grade that you *earn*.

Note to TNT Students

- If you're pursuing secondary teacher certification through Teach North Texas, then you may be aware that you will be required to construct a preliminary teaching portfolio in EDSE 4500 (Project-Based Instruction) and a final portfolio during your final semester of student teaching. Section 2 of this portfolio will ask you to demonstrate your knowledge of your content field. You may find that some of the assignments may naturally become artifacts toward part of this task, and so I encourage you to keep your work after the semester is over to make the eventual construction of your portfolio easier. You may even want to write (and save for later) a brief reflection on the artifact you select, rather than try to remember why the artifact you chose was important once you reach EDSE 4500.
- The specific indicators in the portfolio related to knowledge of mathematical content are as follows:
 - Reflect on one or more artifacts in which you state a mathematical theorem or conjecture and apply both formal and informal mathematical reasoning to the same conjecture.
 - Reflect on one or more artifacts that show your ability to describe a mathematical concept that can be represented in multiple ways and articulate the connections between its representations in clear,

expository prose. Where relevant, identify appropriate technology for exploring the concept and explain limits the technology may place on the knowledge acquired.

- Reflect on one or more artifacts that show your ability to generate a model of a natural phenomenon or describe an already existing model and evaluate how well the model represents the situation, including consideration of the risks, costs, and benefits of the alternatives.
 - Reflect on one or more artifacts that show your ability to identify a topic in your subject area and describe its connection with prerequisite topics, future topics, and other subjects.
 - Reflect on one of more artifacts that show how you bring out the historical and cultural importance of your subject material, its contribution to large ideas, and its significance in today's society. Include a specific lesson plan that incorporates the general history and cultural context of modern science or of mathematics as these fields have evolved.
- Just to be clear: the above is a suggestion for TNT students. This is NOT a course requirement for Math 1720.

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/>).

Prohibition of Discrimination, Harassment, and Retaliation (Policy 16.004)

The University of North Texas (UNT) prohibits discrimination and harassment because of race, color, national origin, religion, sex, sexual orientation, gender identity, gender expression, age, disability, genetic information, veteran status, or any other characteristic protected under applicable federal or state law in its application and admission processes; educational programs and activities; employment policies, procedures, and processes; and university facilities. The University takes active measures to prevent such conduct and investigates and takes remedial action when appropriate.

Emergency Notification & Procedures

UNT uses a system called Eagle Alert to quickly notify students with critical information in the event of an emergency (i.e., severe weather, campus closing, and health and public safety emergencies like chemical spills, fires, or violence). In the event of a university closure, please refer to Canvas for contingency plans for covering course materials.

Retention of Student Records

Student records pertaining to this course are maintained in a secure location by the instructor of record. All records such as exams, answer sheets (with keys), and written papers submitted during the duration of the course are kept for at least one calendar year after course completion. Course work completed via the Canvas online system, including grading information and comments, is also stored in a safe electronic environment for one year. Students have the right to view their individual record; however, information about student's records will not be divulged to other individuals without proper written consent. Students are encouraged to review the Public Information Policy and the Family Educational Rights and Privacy Act (FERPA) laws and the University's policy. See UNT Policy 10.10, Records Management and Retention for additional information.

Acceptable Student Behavior

Student behavior that interferes with an instructor's ability to conduct a class or other students' opportunity to learn is unacceptable and disruptive and will not be tolerated in any instructional forum at UNT. Students engaging in unacceptable behavior will be directed to leave the classroom and the instructor may refer the student to the Dean of Students to consider whether the student's conduct violated the Code of Student Conduct. The University's expectations for student conduct apply to all instructional forums, including University and electronic classroom, labs, discussion groups, field trips, etc. Visit UNT's Code of Student Conduct (<https://deanofstudents.unt.edu/conduct>) to learn more.

Access to Information

Eagle Connect Students' access point for business and academic services at UNT is located at: my.unt.edu. All official communication from the University will be delivered to a student's Eagle Connect account. For more information, please visit the website that explains Eagle Connect and how to forward e-mail Eagle Connect (<https://it.unt.edu/eagleconnect>).

Student Evaluation Administration Dates

Student feedback is important and an essential part of participation in this course. The student evaluation of instruction is a requirement for all organized classes at UNT. The survey will be made available during weeks 13, 14 and 15 of the long semesters to provide students with an opportunity to evaluate how this course is taught. Students will receive an email from "UNT SPOT Course Evaluations via IASystem Notification" (no-reply@iasystem.org) with the survey link. Students should look for the email in their UNT email inbox. Simply click on the link and complete the survey. Once students complete the survey they will receive a confirmation email that the survey has been submitted. For additional information, please visit the SPOT website (<http://spot.unt.edu/>) or email spot@unt.edu.

Survivor Advocacy

UNT is committed to providing a safe learning environment free of all forms of sexual misconduct. Federal laws and UNT policies prohibit discrimination on the basis of sex as well as sexual misconduct. If you or someone you know is experiencing sexual harassment, relationship violence, stalking and/or sexual assault, there are campus resources available to provide support and assistance. The Survivor Advocates can be reached at SurvivorAdvocate@unt.edu or by calling the Dean of Students Office at 940-565-2648.