2025 10Wk1 MATH 1650.410: Precalculus
May 19 – July 25

Instructor Information

Name: Jake Williams

Office Hours: Virtual, by appointment only

Virtual sessions/office hours offer you an opportunity to ask for clarification or find support with understanding class material. I encourage you to connect with me, as I enjoy talking with students to teach them math in a more personal environment.

Communication: Send email to Jake.Williams@UNT.edu. You must use your UNT email account, or I cannot respond at all due to FERPA and other privacy concerns. I highly recommend using UNT's Webmail service for this purpose.

Communication Expectations: Your communication with me and your classmates should be in line with UNT's General Online Communication Guidelines. If you email me and do not receive a reply within one (1) business day, please send a follow-up. A gentle nudge is always appreciated!

Note: One *business day* is Monday through Friday from 9 am to 5 pm.

Course Description

5 hours. Preparatory course for calculus: trigonometric functions, their graphs and applications; sequences and series; exponential and logarithmic functions and their graphs; graphs of polynomial and rational functions, general discussion of functions and their properties.

Course Prerequisites and Readiness Expectations

Commitment to dedicating the required time, typically several hours per day during a summer term, to fully engage with the material is crucial for success. In math courses, concepts and skills build upon each other, making it challenging to catch up if you fall behind. Embracing this commitment is essential for steady progress and mastery of content.

- The official prerequisite to take Precalculus is a grade of C or higher in MATH 1100.
- Digital Literacy
    - Navigate Canvas and WebAssign
    - Message electronically in Canvas Inbox
    - Complete assignments online
    - Scan and submit online hand-written assignments
    - Download and install course software, Respondus Lock Down Browser
    - Download and print required course materials

Course Structure

This course takes place 100% online. Information on how to be successful in a remote learning environment can be found at UNT Online (https://studentaffairs.unt.edu/online-student-experience/).

Except for optional virtual sessions and emailing me personally, your interactions with me and your classmates will take place on Canvas. There are no set required meeting times.

This course begins with the first content module in Canvas open. I will open subsequent modules as we progress through the course. This course has four (4) content modules. Module, chapter, and unit are used interchangeably.

In each content module, you will find student lecture notes templates that correspond to instructional videos. The lesson videos present instruction and solutions to examples. Print the student notes and fill in the blanks as you watch the videos. This is how you "attend class."

Course Objectives

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

- Apply properties of functions to graphing and modeling.
- Solve equations involving algebraic and transcendental functions.
- Graph algebraic and transcendental functions *without* using technology.
- Identify and determine exact and approximate trigonometric function values in both radians and degrees.
- Prove trigonometric identities.
- Solve right and oblique triangles.
- Define polar coordinates and graph polar equations.
- Apply the terminology of sequences and series to determine terms and sums.

Required Course Materials

Cengage WebAssign

WebAssign is an online course delivery platform accessed directly through Canvas. WebAssign access includes all online homework assignments, the textbook, and additional learning resources. Use the link in Canvas to register immediately. You must register for WebAssign on the first day of the semester. See our Canvas page for more information about registration for and use of WebAssign.

WebAssign grants a free 10-day trial. 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.

Textbook Information

Access: The textbook is available only through the required WebAssign platform. *Precalculus: Mathematics for Calculus*, 8th Edition (2025) by James Stewart, Lothar Redlin, and Saleem Watson, Cengage Learning.

Note: A printed textbook is not required for this course.

Calculator Policy

While you may decide to use a calculator when working on your assignments in WebAssign, please note that you will not be permitted to use one on quizzes or exams. Because of this, I want to encourage you to do as much of your WebAssign assignments and written worksheets without a calculator.

Please be aware that, in general, the use of a calculator of any sort on the exams and quizzes will result in a zero (0) on that quiz or exam. Do as much of your practice and learning as you can without a calculator.

If a calculator is needed for certain computations on a quiz or exam, one will be provided inside Lockdown Browser and Respondus Monitor. It will be the only calculator permitted; use of any other computation device will result in a zero (0) on that quiz or exam.

Technology

- Computer, tablet, or laptop that is compatible with all required apps for this course.
- A smartphone or scanner to make PDFs or take photos of assignments.
- Reliable internet access.
- Webcam and microphone for proctored tests.
- Purchased access to WebAssign.
- A printer is recommended but not required.

See also: Canvas Technical Requirements (https://lms.unt.edu/resources/canvas-requirements.html).

Course Evaluation

Evaluation components are listed below with their percentages of course grade. Descriptions of components follow.

Homework (WebAssign) – 10%
Quizzes – 10%
Written Assignments (Worksheets) – 10%
Engagement Tasks (Discussions, Orientation assignments, etc.) – 2%
Midterm Exams (average of all) – 50%
Final Exam – 20%

Your Course Grade

Your grades will be posted in Canvas Grades.

- A: 90-100% (Outstanding, excellent work. Student performs well above the minimum criteria.)
- B: 80-89% (Good, impressive work. Student performs above the minimum criteria.)
- C: 70-79% (Solid, college-level work. Student performs at the minimum criteria.)
- D: 60-69% (Below average work. Student performs below the minimum criteria.)
- F: 59% and below (Sub-par work. Student performs well below the minimum criteria.)

No rounding is done when assigning final grades. If you receive 69.99% in my course, you will be assigned a "D", not a "C". The same goes for the other letter grade boundaries.

Your course grade is determined solely by the results you achieve on the graded items. I do not grade on a curve, as that would be a comparison of your outcomes to others, nor do I offer extra credit or credit recovery options. I encourage you to seek collaborative learning experiences. Explore Navigate's Study Buddy (https://navigate.unt.edu) tool to join study groups and enhance your understanding. Maximize your learning with our coaching staff at the Learning Center. Focus on areas where you are struggling in this course by connecting with me and utilizing the UNT Math Tutor Lab.

Course Components

Homework – You Learn by Practice!

The primary purpose of homework is to provide you with opportunities to learn, practice, and retain new content.

- To that end, you will typically have assignments daily, starting the first day of class. All assignments are accessed through Canvas.
- I recommend you maintain a dedicated *paper* notebook for your course work. Be sure to show all work, including steps and the theorems or rules used.
- As an incentive to develop strong time management and planning skills, a 10% bonus will be awarded for any homework completed more than 48 hours before the deadline.
- Most WebAssign homework allows 5 attempts on each question, except for true-false and multiple-choice items.
- All course assignments are due 11:59 PM of the posted due dates. If a due date conflicts with your schedule, work ahead to avoid any last-minute rush.
    - WebAssign homework will always be due on a Monday evening, but additional assignments are evenly distributed throughout the weeks.
- Remember, late work is not accepted. However, to accommodate for unforeseen circumstances, your three (3) lowest homework grades will be dropped at the end of the term.

Quizzes

Quizzes serve as a means for you to assess your understanding of the material as you progress through the course. These regular, lower-stakes assessments are designed to help you better prepare for the module exams.

- For better quiz results, complete the related homework first.
- Quizzes are delivered on Canvas through Respondus Lockdown Monitor.
- Weekly quizzes are available at the beginning of each week.
- Quizzes are due by 11:59 PM on Monday of the following week.
- Quizzes are timed and must be completed in one sitting.
- You get two (2) attempts per quiz.
- At the end of the term, your one (1) lowest quiz score will be dropped.

Written Assignment Worksheets

Written submission assignments provide you with practice on presenting math work correctly, emphasizing the importance of demonstrating appropriate reasoning and accurate computations. This is an essential skill for this course and all subsequent courses.

- Access and begin working on written assignments *along* with WebAssign homework, to write your first draft.
- Correct, revise, and ***neatly rewrite*** your first draft. Correct answers without mathematically correct supporting work receive no credit.
- Make a PDF or a clear, well-lit photo of your work and submit it on Canvas by 11:59 PM of the due date, which will be a Friday.

Engagement Tasks

Engagement tasks include orientation assignments and discussion posts. The discussion assignments are designed to keep you connected with your classmates.

Exams

You have five (5) exams: Four (4) midterm exams and a required final exam. Content questions are NOT answered on exam days.

Exam 1 – Tuesday June 3, closes at 11:59 PM. Module 1 Function Fundamentals
Exam 2 – Tuesday, June 17, closes at 11:59 PM. Module 2 Algebra of Functions and Algebraic Functions
Exam 3 – Wednesday, July 2, closes at 11:59 PM. Module 3 Transcendental Functions
Exam 4 – Wednesday, July 23, closes at 11:59 PM. Module 4 Analytic Trigonometry
Final Exam – Friday, July 25**,** closes at 11:59 PM. See Final Exam Schedule. The final exam is comprehensive.

This course does not accept late work, regardless of the reason.

Changes to Syllabus

Changes made to the syllabus will be posted as an Announcement on Canvas.

Course Schedule

All course assignments are due 11:59 PM of the posted due date. Do your learning coursework several days before the posted due dates. Learning coursework means printing out the student notes, watching lesson videos to complete the notes, review the notes, and read supplemental textbook sections. That is, *do* your coursework before the assignment is *due*.

Week 1

Date	Content Completion Expected/Assignments Due

5/19/2025	• Module 1.1 (2.1 Functions) • Discussion: Getting Acquainted
5/20/2025	• Module 1.2 (5.1 Unit Circle) • Syllabus Quiz
5/21/2025	• Module 1.3 (5.2 Trig Functions of Real Numbers)
5/22/2025	• Module 1.4 (1.7 Modeling with Equations) • Module 1.5 (1.8 Inequalities)
5/23/2025	• Module 1.6 (1.10 Lines) • Module 1 Worksheet 1

Week 2

Date	**Content Completion Expected/Assignments Due**
5/26/2025	*No classes in observance of Memorial Day*
5/27/2025	• Module 1 Quiz 1 • Module 1.7 (12.1 Sequences and Summation Notation) • Module 1.8 (12.2 Arithmetic Sequences)
5/28/2025	• Module 1.9 (12.3 Geometric Sequences)
5/29/2025	• Module 1.10 (1.12 Modeling Variations) • Module 1 Discussion – Self-Directed Learning
5/30/2025	• Module 1.11 (2.2 Graphs of Functions) • Module 1.12 (2.3 Getting Information from Graphs) • Module 1 Worksheet 2

Week 3

Date	**Content Completion Expected/Assignments Due**
6/2/2025	• Module 1 Quiz 2 • Review for Exam 1
6/3/2025	**Exam 1**
6/4/2025	• Module 2.1 (2.4 Average Rate of Change) • Module 2.2 (2.6 Transformations of Functions)
6/5/2025	• Module 2.3 (2.7 Combining Functions) • Module 2.4 (2.8 One-to-One Functions and their Inverses)
6/6/2025	• Module 2.5 (3.1 Quadratic Functions and Models) • Module 2 Worksheet 1

Week 4

Date	Content Completion Expected/Assignments Due
6/9/2025	• Module 2 Quiz 1 • Module 2.6 (3.2 Polynomial Functions and their Graphs)
6/10/2025	• Module 2.7 (3.3 Dividing Polynomials)
6/11/2025	• Module 2.8 (3.4 Real Zeros of Polynomials)
6/12/2025	• Module 2.9 (1.6 Complex Numbers) • Module 2.10 (3.5 Complex Numbers, Fundamental Theorem of Algebra) • Module 2 Discussion – New Discoveries
6/13/2025	• Module 2.11 (3.6 Rational Functions) • Module 2 Worksheet 2

Week 5

Date	Content Completion Expected/Assignments Due
6/16/2025	• Module 2 Quiz 2 • Review for Exam 2
6/17/2025	**Exam 2**
6/18/2025	• Module 3.1 (5.3 Trigonometric Graphs)
6/19/2025	*No Classes in observance of Juneteenth*
6/20/2025	• Module 3.2 (5.4 More Trigonometric Graphs) • Module 3 Worksheet 1

Week 6

Date	Content Completion Expected/Assignments Due
6/23/2025	• Module 3 Quiz 1 • Module 3.3 (5.5 Inverse Trig Functions and Graphs)
6/24/2025	• Module 3.4 (4.1 Exponential Functions)
6/25/2025	• Module 3.5 (4.2 The Natural Exponential Function)
6/26/2025	• Module 3.6 (4.3 Logarithmic Functions) • Module 3.7 (4.4 Laws of Logarithms) • Discussion Module 3 – Cultivating a Growth Mindset
6/27/2025	• Module 3.8 (4.5 Exponential and Logarithmic Equations) • Module 3 Worksheet 2

Week 7

Date	Content Completion Expected/Assignments Due
6/30/2025	• Module 3 Quiz 2 • Module 3.9 (4.6 Modeling with Exponential Functions)
7/1/2025	• Review session for Exam 3 (*no assignments due today*)
7/2/2025	**Exam 3**
7/3/2025	• Module 4.1 (6.1 Angle Measure)
7/4/2025	*No Classes in observance of Independence Day.*

Week 8

Date	Content Completion Expected/Assignments Due
7/7/2025	• Module 4 Quiz 1 • Module 4.2 (6.2 Trigonometry of Right Angles)
7/8/2025	• Module 4.3 (6.3 Trigonometric Functions of Angles)
7/9/2025	• Module 4.4 (6.4 Inverse Trig and Right Triangles)
7/10/2025	• Module 4.5 (6.5 The Law of Sines)
7/11/2025	• Module 4.6 (6.6 The Law of Cosines) • Module 4 Worksheet 1

Week 9

Date	Content Completion Expected/Assignments Due
7/14/2025	• Module 4 Quiz 2 • Module 4.7 (7.1 Trigonometric Identities)
7/15/2025	• Module 4.8 (7.2 Addition and Subtraction Formulas)
7/16/2025	• Module 4.9 (7.3 Double-Angle and Half-Angle Formulas)
7/17/2025	• Module 4.10 (7.4 Basic Trig Equations) • Discussion Module 4 – Demonstrating and Explaining an Involved Solution
7/18/2025	• Module 4.11 (7.5 More Trig Equations) • Module 4 Worksheet 2

Week 10

Date	Content Completion Expected/Assignments Due
7/21/2025	• Module 4 Quiz 3 • 4.12 (8.1 Polar Coordinates)

7/22/2025	Review for Exam 4 (*no assignments due today*)
7/23/2025	**Exam 4**
7/24/2025	Review for Final Exam (*no assignments due today*)
7/25/2025	**FINAL EXAM**

Course Policies

Academic Integrity

Cheating will not be tolerated. Any student found cheating will receive a zero on that assignment and may receive an F for the course for cheating on an exam. A report will be filed in accordance with UNT's Student Academic Integrity Policy.

Attendance

Research has shown that students who attend class are more likely to be successful. In an online class, attendance means regularly completing the student lecture notes as you watch the instructional videos. **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.

In an online course, you have the flexibility to work ahead. For any due date conflict, work ahead. For exams, schedule with me to take it prior to the posted exam date.

Examination Policy

Exams will be administered in Canvas with Respondus Lockdown Browser and will be available during the posted exam period. **Exams not submitted by 11:59 PM receive a zero**, regardless of when you begin the exam. You may access Exams through the *Syllabus* tab on the left side of the Canvas navigation menu, or the content module.

If you **miss an exam, you receive a zero for that exam**. There are **no make-up exams**. However, if you have a university excused absence and provide me documentation within two (2) business days of the missed exam, then the zero may be replaced with your final exam grade (this includes missing an exam due to illness).

Early Exams

If you have a conflict with a scheduled exam date, you may request to take your exam early. The request must be sent to my email one week prior to your desired early exam date.

Exam Protocol

- Read the How to Take Exam with Respondus module in Canvas.
- Clear your test-taking environment and show clean desk surface to webcam.
- Once opened, you have 60 minutes to complete the exam. You will have more time for the final exam.

- Do not open the exam unless you are prepared to take the test, and your technology is ready and in working order.
- No extra time nor re-dos will be granted to account for technical difficulties.
- Work is NOT accepted through email.
- Your work must be shown to the camera at the end of your exam or quiz, prompted by the final question.

You will be able to see your exam grade on Canvas about one (1) week after the exam. Feel free to contact me if you'd like to review any problems with me. Decisions regarding credit are final and not open for discussion.

Late Work Policy

UNT is a community of achievers and doers who strive for excellence in everything they pursue. With that in mind, there are standards and expectations set for the class, which include completing and submitting work by the posted due date. Late work is not accepted.

There will be no late exams or retakes. If an exam is not submitted by 11:59PM, then a grade of zero will be recorded. (See the Examination Policy for more information.)

Student Support Services & Technical Assistance

Academic Support & Student Services

UNT strives to offer you a high-quality education and a supportive environment, so you learn and grow. As a faculty member, I am committed to helping you be successful as a student. To learn more about campus resources and information on how you can be successful at UNT, go to Succeed at UNT (unt.edu/success) and explore the many links at Wellness at UNT (unt.edu/wellness). To get all your enrollment and student financial-related questions answered, go to Integrated Student Services (scrappysays.unt.edu).

Technical Assistance for 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.

Visit the UIT Help Desk website for their current support hours. Website link, email, phone number, and office location provided as follows:

UIT Help Desk: UIT Student Help Desk (http://www.unt.edu/helpdesk/index.htm)

Email: helpdesk@unt.edu

Phone: 940-565-2324
In Person: Sage Hall, Room 330

Canvas Technical Requirements: Canvas Technical Requirements (https://lms.unt.edu/resources/canvas-requirements.html)

Welcome to UNT!

As members of the UNT community, we have all made a commitment to be part of an institution that respects and values the identities of the students and employees with whom we interact. UNT does not tolerate identity-based discrimination, harassment, and retaliation.

UNT Policies

Academic Integrity Standards and Consequences. 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.

Students in my class can improve their performance by attending class, consistently doing their own work, and accessing appropriate resources. Academic Integrity Policy violations will not. Read and follow this important set of guidelines for your academic success.

ADA Accommodation Statement

UNT makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Access (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 Office of Disability Access website. (https://disability.unt.edu/).

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).

Emergency Notification and Procedures

UNT uses a system called Eagle Alert to quickly notify students with critical information in the event of an emergency. In the event of a university closure, please refer to the UNT Learning Management System, Canvas, for contingency plans for covering course materials.

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.

Important Notice for F-1 Students taking Distance Education Courses

Federal regulations state that students may apply only 3 fully-online semester credit hours (SCH) to the hours required for full-time status for F-1 Visa (PDF) holders. Full-time status for F-1 Visa students is 12 hours for undergraduates and 9 hours for graduate students.

Student Verification

UNT takes measures to protect the integrity of educational credentials awarded to students enrolled in distance education courses by verifying student identity, protecting student privacy, and notifying students of any special meeting times/locations or additional charges associated with student identity verification in distance education courses. See Student Identity Verification Policy, (https://policy.unt.edu/policy/07-002).

Summary of Key Dates – 2025 10Wk

See Registration Guide.

May 19, Monday

Classes begin.

June 3, Tuesday

Last Day to Drop a Class Section Without a W. Courses dropped before this date will not appear on official transcript. (*Dropping courses may impact financial aid and degree completion. See advisors.*)

June 4, Wednesday

Drop with a Grade of W Begins. The course appears on the transcript with a Grade of W and tuition and fees remain. (*Dropping courses may impact financial aid and degree completion. See advisors.*)

June 13, Friday

Last day to change to pass/no pass (undergrads)

July 9, Wednesday

Last day to drop a course or all courses with a grade of W.

July, 10, Thursday

Beginning this date, 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 in no more than one academic year.

July 25

Final Examination, term ends.