College Algebra/Math 1100.125/Fall 2024

Instructor Information

Name Jake Williams (he/him/his)

Office location **GAB 462**

Office hours MWF 11 am - 12 pm, TR 10 am - 11:30 am

Email Address Jake.Williams@UNT.edu

> I communicate with my students primarily through Outlook 365, which is provided to all UNT students. In general, you can expect responses to emails within one (1) business day on weekdays. Emails received on weekends or outside of normal business hours may have a delayed response until the next business day. For additional information on communication expectations between students and instructors, see CLEAR's guidelines

at (https://clear.unt.edu/online-communication-tips).

Course Description, Structure, and Objectives

College Algebra Course Title **Course Number MATH 1100 Course Section** 125

Class meeting time Mondays, Wednesdays and Fridays, 1:00 pm – 1:50 pm in GAB 105

Course Description Designed to build technical proficiency in algebra for students who will need strong algebra

> skills in a higher-level mathematics course. Study of polynomial, radical, rational, logarithmic and exponential functions with applications; building functions from data; systems of equations. Note that MATH 1100 at UNT does not satisfy the mathematics component of the core curriculum. Students who feel they acquired solid algebra skills in high school are strongly encouraged to take the mathematics placement exam to begin in a

higher-level mathematics course.

Course Pre-requisites Two years of high school algebra and one year of geometry, and consent of department; or

a grade of C or better in MATH 1010, MATH 1581 or MATH 1681. A grade of C or better in MATH 1100 is required when MATH 1100 is a prerequisite for other mathematics courses.

Course Objectives Upon successful completion of this course, students will:

> 1. Demonstrate and apply knowledge of properties of functions, including domain and range, operations, compositions, and inverses.

- 2. Recognize and apply polynomial, rational, radical, exponential and logarithmic functions and solve related equations.
- 3. Apply graphing techniques.
- 4. Evaluate all roots of higher degree polynomial and rational functions.
- 5. Recognize, solve and apply systems of linear equations using matrices.

Course Structure This is a 16-week course that meets face-to-face in a classroom two times a week. The

course will cover 8 modules and you will be assessed by completing 3 exams and a

cumulative final exam.

Required Course Materials

This course has digital components. To fully participate in this class, students will need internet access to reference content on the Canvas Learning Management System and ALEKS. If circumstances change, you will be informed of other technical needs to access course content. Information on how to be successful in a digital learning environment can be found at Learn Anywhere (https://online.unt.edu/learn).

McGraw-Hill's ALEKS. You will access your math course platform via Canvas. The course content (assignments, help tools, textbook, etc.) is delivered in the online platform Canvas (https://unt.instructure.com). Register in ALEKS the first class day of the semester. No extensions will be given for any missed assignments for any reason. Not having access to ALEKS is not an exception. ALEKS access will include eText College Algebra with Corequisite Support, 1e Edition, by Miller/Gerken.

ALEKS grants a no-cost, temporary 14-day access. You must purchase your access before the temporary access expires. If you do not make the purchase before temporary period ends, you may lose credit for all work previously completed. Use your official UNT roster name when you register in ALEKS. I cannot give credit to a student enrolled in this course for work completed under a different name.

You must purchase the following:

COREQUISITE ALEKS 360CARD COLLEGE ALGEB. Publisher: McGraw-Hill ISBN: 9781266387142

Calculator Policy

Calculators are not allowed in this course. Occasionally, you will be asked to use a scientific calculator on your homework.

Course Technology & Skills

Minimum Technology Requirements

- Access to a Computer
- Reliable internet access
- (https://clear.unt.edu/supported-technologies/canvas/requirements)
- (https://www.aleks.com/support/system_requirements)

Computer Skills & Digital

Literacy

- Using Canvas
- Using email with attachments
- Scanning documents and saving as PDF

Assessment

Evaluation components include activities, attendance, homework, modules exams and the final exam. Description of each component follows

Homework (ALEKS) – 22.5% Exam 1 (Modules 1, 2, and 3) – 17.5% Exam 2 (Modules 4 and 5) – 17.5% Exam 3 (Modules 6 and 7) – 17.5%

Final Exam - 25%

Course Grade

Your course grade is determined by your performance on the graded items. There will be no opportunity for extra credit, nor will the grades be curved. Your grades will be posted in Canvas Grades.

Grades are based on mastery of the content. I do not grade on a "curve" because that is a comparison of your performance to others. I do, however, encourage you to find opportunities to learn with and through others. Maximize your learning with our tutors

at the UNT Math Lab (Sage Hall, room 130). Focus on areas where you are struggling in this course there, and attend scheduled exam preparation sessions during normal class time the session before each exam, time permitting. The following is a breakdown of how your final letter grade will be assigned according to your score on Canvas.

- A: 90+
- B: 80–89
- C: 70–79
- D: 60–69
- F: 0-59

Rounding when assigning final letter grades will follow standard rounding rules – no exceptions.

Homework

Homework will be given regularly. Most of your homework will be administered through ALEKS. Although the majority of your homework will be presented electronically through Canvas and ALEKS, working through the material on paper is essential for learning and developing the math skills in this course. At the end of the term, three (3) lowest grades will be dropped from the calculation of the homework average.

Exams

There will be three (3) exams given during the semester. There are no retakes on exams.

Final Exam

The Final Exam is comprehensive and will test the student's math skills on all content covered throughout the entire semester. This exam will be taken during the last week of classes at the time specified in the official Final Exam Schedule.

Course Policies

Academic Dishonesty

Cheating will not be tolerated. Any student found cheating will receive a zero on the assignments; and may receive an F for the course, if found cheating on an exam. A report will be filed with the Office of Academic Integrity. Cheating includes, but is not limited to, discussing exam items with any student currently enrolled in this course; posting exam items and/or exam-related questions on messaging apps; accessing notes, textbook, or ANY source of help during a test AND providing help as well.

The <u>Academic Integrity Policy (PDF)</u> states: 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

The University of North Texas makes reasonable academic accommodation for students with disabilities. Students seeking reasonable accommodation must first register with the Office of Disability Access (ODA) to verify their eligibility. If a disability is verified, the ODA will provide you with a reasonable accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request reasonable accommodations at any time; however, ODA notices of reasonable 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 reasonable accommodation for every semester and must meet with each faculty member prior to implementation in each class. Students are strongly encouraged to deliver letters of reasonable accommodation during faculty office hours or by appointment. Faculty members have the authority to ask students to discuss such letters during their designated office hours to protect the privacy of the student. For additional information, refer to the Office of Disability Access website (https://studentaffairs.unt.edu/office-disability-access). You may also contact ODA by phone at (940) 565-4323.

Attendance/Active Participation

Research has shown that students who attend class are more likely to be successful. You should attend every class unless you have a university excused absence such as active military service, a religious holy day, or an official university function as stated in the Student Attendance and Authorized Absences Policy (PDF) (https://policy.unt.edu/policy/06-039). If you cannot attend a class due to an emergency, please let me know. Your safety and well-being are important to me.

In this class, attendance means physically attending class and staying actively engaged in discussions, along with taking notes. As a side note, I have great respect for students who are balancing the demands of their coursework along with the responsibilities of life beyond the classroom. However, if you run into challenges that cause you to fall behind in class, please contact me immediately so we can work together, as there may be resources available to assist and support you.

Examination Policy

There will be three (3) module exams and one (1) final exam during the semester. Keep a record of all your scores. Be sure to review your module exams once it has been reviewed by the instructor and officially graded.

Examination Etiquette

Exams will be taken in the classroom during our regular class meetings. When it is time for the exam, the following lists the expectations:

- Place all papers, textbooks, notes, etc. in a backpack or a book bag and close it securely.
- Turn off/remove all electronic devices (unless medically necessary). This includes cell phones, headphones, laptops, smartwatches, etc.
- Handling of any such electronic devices during an exam will be construed as cheating (receiving unauthorized aid) and may
 result in a zero for that exam.
- Do not wear hats or caps with brims during exams.
- Do not share any materials during an exam. This includes, but is not limited to pencils, erasers, calculators, etc.
- Have only the exam, pencil(s), eraser and occasionally a calculator or a straight-edge out during an exam. There will be space to show work on the actual exam.
- You will not be permitted to have any of your own scratch paper during an exam.

If you miss an exam, a grade of zero will be recorded for that exam. If you receive a zero for academic dishonesty on an exam, the final exam score will NOT replace that zero.

Missed Exam Policy

- O Advanced notice of absence: If you have a known conflict with a scheduled exam date, you may request to take your exam early. The request must be sent to my email (see above) at least one week prior to the scheduled exam date, as this allows enough time to make proper adjustments/arrangements. If a student does not take a scheduled exam, a zero will be recorded for that exam and a notice may be sent through the registrar's office.
- O <u>University excused absence</u>: if you have a university excused absence such as active military service, a religious holy day, or an official university function as stated in the <u>Student Attendance and Authorized Absences Policy (PDF)</u>, and you provide me documentation within 2 business days of the missed exam, then this zero will be replaced by your final exam grade (this includes missing an exam due to illness). If you receive a zero for academic dishonesty on an exam, the final exam score will NOT replace that zero.
- Unexcused Absence: If you miss an exam, a zero will be recorded for that exam grade and your final exam score will replace that one zero, up to a maximum grade of 75%. If you receive a zero for academic dishonesty on an exam, the final exam score will NOT replace that zero

Late Work Policy

There are standards and expectations set for this class, including that work must be completed and submitted by the posted due date. If an assignment is not completed and submitted by the due date, then a grade of zero will be recorded without exception.

Important Dates

Date	Importance of date	
Aug 19	Classes Begin	
Aug 30	Census Date	
Sept 2	Labor Day Holiday (no classes)	
Nov 8	Last day for a student to drop a course with a W.	
Nov 9	Beginning this date, a student who qualifies may request an Incomplete, with a	
	grade of I.	
Nov 25 – Dec 1	Thanksgiving Break (no classes)	
Dec 4-5	Pre-Finals Days	
Dec 5	Last Regular Class Meeting	
Dec 6	Reading Day (no classes)	

Emergency Notification and 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. Emergency Notifications and Procedures Policy(PDF) (https://policy.unt.edu/policy/06-049).

Changes to Syllabus

Changes made to the syllabus will be posted as an Announcement in Canvas or possibly sent as a mass email to the section, depending on the pertinence of the update.

Tentative Schedule

Week	Date	Topic
Week 1	08/19/24	M1A: Order of Operations & Fractions
	08/21/24	M1B: Simplify Radical Expression, Rationalizing & Rational Exponents
	08/23/24	M1C: Linear Equations & Inequalities
Week 2	08/26/24	M1D: Graphing Linear Equations M1E: Slope & Equations of Lines
	08/28/24	M1E: Slope & Equations of Lines (continued) M2A: Intro to Functions
	08/30/24	M2B: Domain & Range of Functions
Week 3	09/02/24	Labor Day - No Classes
	09/04/24	M2C: Distance & Midpoint Formula
	09/06/24	M2D: Piecewise functions

Week 4	09/09/24	M3A: Evaluate functions M3B: Average Rate of Change & Difference Quotient
	09/11/24	M3B: Average Rate of Change & Difference Quotient (continued) M3C: Algebra of functions
	09/13/24	M3D: Composition of functions M3E: Inverse Functions
Week 5	09/16/24	M3E: Inverse Functions (continued)
	09/18/24	Exam 1
	09/20/24	M4A: Abs Value Equations & Inequalities
Week 6	09/23/24	M4B: Complex Numbers M4C: Factoring
	09/25/24	M4C: Factoring (continued) M4D: Solve Equations & Inequalities by factoring
	09/27/24	M4D: Solve Equations & Inequalities by factoring (continued) M4E: Solve Equations using square root property, completing the square & quadratic formula
	09/30/24	M4E: Solve Equations using square root property, completing the square & quadratic formula (continued)
Week 7	10/02/24	M5A: Solve Rational Equations & inequalities
	10/04/24	M5A: Solve Rational Equations & inequalities (continued) M5B: Solve Radical Equations
	10/07/24	M5B: Solve Radical Equations (continued)
Mack 9	10/09/24	M5C: Logarithms
Week 8	10/11/24	M5C: Logarithms (continued) M5D: Solve Exponential & Log Equations
	10/14/24	M5D: Solve Exponential & Log Equations (continued)
Week 9	10/16/24	Exam 2
	10/18/24	M6A: Transformations
	10/21/24	M6B: Symmetry & Even and Odd Functions M6C: Graphing Quadratic Functions
Week 10	10/23/24	M6C: Graphing Quadratic Functions (continued) M6D: Graphing Rational Functions
	10/25/24	M6D: Graphing Rational Functions (continued)
	10/28/24	M7A: Graphing Polynomial Functions
Week 11	10/30/24	M7A: Graphing Polynomial Functions M7B: Polynomial Division & Theorems
	11/01/24	M7B: Polynomial Division & Theorems (continued)

	11/04/24	M7B: Polynomial Division & Theorems (continued) M7C: Graphing Radical Functions
Week 12	11/06/24	M7D: Graphing Exponential Functions
Week 13 Thanksgiving Break Week 14	11/08/24	M7E: Graphing Logarithmic Functions
	11/11/24	M7E: Graphing Logarithmic Functions (continued)
	11/13/24	Exam 3
	11/15/24	M8A: Linear Applications
	11/18/24	Thanksgiving - No classes
	11/20/24	Thanksgiving - No classes
	11/22/24	Thanksgiving - No classes
	11/25/24	M8B: Quadratic Applications
	11/27/24	M8B: Quadratic Applications (continued) M8C: Exponential Applications
	11/29/24	M8C: Exponential Applications M8D: Systems (Matrix) Applications
	12/02/24	M8D: Systems (Matrix) Applications (continued)
Week 15	12/04/24	Review
	12/06/24	Reading Day - No classes
Week 16	Saturday, Dec. 7	Final Exam, 10:30 am – 12:30 pm

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's full Non-Discrimination Policy can be found in the UNT Policies section of the syllabus.

UNT Policies

In addition to standards for success in courses, there are UNT policies and procedures in place to support students. You can access these policies in Navigate (Navigate.unt.edu), in Canvas under the Help menu, in EIS, and on the Student Support Services & Policies page, which includes:

- Policies include:
 - Prohibition of Discrimination, Harassment and Retaliation, Academic Integrity Policy, ADA Policy and Retention of Student Records
- Student Expectations and Preferences include:
 - Acceptable Student Behavior, Use of Student Work, Important Notice for F-1 Students Taking Distance Education Courses, Student Verification
- Student Wellness and Academic Resources include:
 - Survivor Advocacy, Mental Health, Technical Assistance, Academic Support Services and Additional Student Support Services
- Communications include:
 - o Eagle Connect, Emergency Notification and Student Evaluation Administration Dates

Rules of Engagement

Rules of engagement refer to the way students are expected to interact with each other and with their instructors. Here are some general guidelines:

- While the freedom to express yourself is a fundamental human right, any communication that utilizes cruel and derogatory language on the basis 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 will not be tolerated.
- Treat your instructor and classmates with respect in any communication online or face-to-face, even when their opinion differs from your own.
- Speak from personal experiences. Use "I" statements to share thoughts and feelings. Try not to speak on behalf of groups or other individual's experiences.
- Use your critical thinking skills to challenge other people's ideas, instead of attacking individuals.
- Avoid using all caps while communicating digitally. This may be interpreted as "YELLING!"
- Be cautious when using humor or sarcasm in emails or discussion posts as tone can be difficult to interpret
 digitally.
- Avoid using "text-talk" unless explicitly permitted by your instructor.
- Proofread and fact-check your sources.
- Keep in mind that online posts can be permanent, so think first before you type.