

**UNIVERSITY OF NORTH TEXAS AT DALLAS**  
**COURSE SYLLABUS**  
**Spring 2016**

<b>MATH 1352 Algebra for Teachers 3 Credit Hours</b>	
<b>Department:</b> Mathematics and Information Sciences	
<b>Division:</b> Liberal Arts and Life Sciences	
<b>Instructor Name:</b>	Dr. Gwendolyn Johnson
<b>Office Location:</b>	Bldg 2 room 232
<b>Office Phone:</b>	972-338-1320
<b>Email Address:</b>	Gwendolyn.johnson@untDallas.edu
<b>Office Hours:</b>	Mondays and Wednesdays 10:00 to 11:30 and 2:30 to 3:30 (I can stay later if needed.) Tuesdays and Thursdays 3:00 to 5:30 Fridays by appointment and email
<b>Class Meeting Times:</b>	Mondays and Wednesdays 1:00 to 2:20
<b>Course Catalog Description:</b>	Intended for individuals seeking EC-6 or Math 4-8 teaching certification. Problem solving, algebraic expressions and equations, patterns, arithmetic and geometric sequences, functions (linear, quadratic and exponential), generalization, and proof
<b>Textbook:</b>	<i>Developing Essential Understanding of Algebraic Thinking for Teaching Mathematics in Grades 3-5</i> . National Council of Teachers of Mathematics.
<b>Required Materials</b>	Graphing calculator, graph paper, ruler
<b>Prerequisites:</b>	TSI-Math complete or MATH 1010 with a grade of C or better
<b>Learning Resources:</b>	Blackboard Learn: <a href="https://learn.unt.edu/">https://learn.unt.edu/</a> Assignments, grades, and PowerPoint presentations will be posted in Blackboard. Students are expected to use this resource.  UNT Dallas Math Lab Building 1 room 336 Free math tutoring and homework help

## Standards of Professional Organizations

### Interstate Teacher Assessment and Support Consortium (InTASC) Standards

#### Standard 4: Content Knowledge

The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and creates learning experiences that make the discipline accessible and meaningful for learners to assure mastery of the content.

#### Standard 5: Application of Content

The teacher understands how to connect concepts and use differing perspectives to engage learners in critical thinking, creativity, and collaborative problem solving related to authentic local and global issues.

### Texas State Board for Educator Cert. Mathematics Generalist Standards

#### Standard II. Patterns and Algebra

The mathematics teacher understands and uses patterns, relations, functions, algebraic reasoning, analysis, and technology appropriate to teach the statewide curriculum (Texas Essential Knowledge and Skills [TEKS]) in order to prepare students to use mathematics.

#### Standard V. Mathematical Processes

The mathematics teacher understands and uses mathematical processes to reason mathematically, to solve mathematical problems, to make mathematical connections within and outside of mathematics, and to communicate mathematically.

## Course Evaluation Methods

Instrument	Points
Tests	600
Final Exam	150
Homeworks	120
Attendance and Participation	65
Group Activities	65
<b>Total:</b>	<b>1,000</b>

#### Grade Determination:

- A = 90% or better
- B = 80 – 89%
- C = 70 – 79%
- D = 60 – 69%
- F = less than 60%

## Learning Objectives

1. Identify aspects of functions such as domain and range, independent and dependent variables.
2. Simplify and solve numeric and algebraic expressions and equations. Use the distributive property and factoring to generate equivalent expressions and equations.
3. Write linear equations to model real-life situations.
4. Identify aspects of linear functions such as intercepts and rate of change.
5. Identify aspects of quadratic functions such as axis of symmetry, zeros, and vertex.
6. Write and solve systems of linear equations.

## Course Outline

Dates	Monday	Wednesday
Jan. 20		Go over the syllabus. PowerPoint 1A: What is a function? Group Activity: Perimeter as a Function of Side Length
Jan. 25, 27	PowerPoint 1B: Function tables, expressions, equations	PowerPoint 1C: Dep. and indep. variables, domain and range
Feb. 1, 3	Group Activities: Jumping Jacks and Crackers	Review and practice problems <b>Last day to drop without a W</b>
Feb. 8, 10	<b>Test: Functions</b>	PowerPoint 2A: Simplify expressions, plug in values, sequences
Feb. 15, 17	PowerPoint 2B: Solving equations and inequalities	PowerPoint 2C: Factoring and FOIL
Feb. 22, 24	Review and practice problems	<b>Test: Equations and Factoring</b>
Feb. 29 and Mar. 2	PowerPoint 3A: Graphing linear functions, $y = mx + b$ , slope formula, Group Activity: Skate Rental	Practice problems – class online
March 7, 9	PowerPoint 3B: Graphing inequalities, slopes of parallel lines	Group Activity: Matching Representations
Mar. 14-18	Spring Break! Midterms grades will be available March 19.	
Mar. 21, 23	PowerPoint 3C: Review of Graphing	<b>Test: Graphing Linear Functions</b>
Mar. 28, 30	PowerPoint 4A: Writing expressions and equations	Class is online
April 4, 6	PowerPoint 4B: Writing expressions and equations	Class is online <b>April 8 is the last day to drop with a W (written permission required).</b>
Apr 11, 13	PowerPoint 4C: Review of Writing Equations	<b>Test: Writing Equations</b>
April 18, 20	PowerPoint 5A: Systems of Linear Equations	Group Activity: Areas of Rectangles
April 25, 27	PowerPoint 5B: Quadratics	Practice problems – class online
May 2, 4	PowerPoint 5C: Review of Systems and Quadratics	<b>Test: Systems and Quadratics</b>
May 9, 11	<b>Final Exam:</b> Check the Final Exam Schedule	

## Course Policies

### Attendance

Missing class for any reason will affect your attendance grade. There is no such thing as an “excused” absence. You do NOT need to bring doctor’s notes. Arriving late or leaving early will affect your attendance grade. If you will be arriving late or leaving early on a regular basis, please let the instructor know the reason.

### Blackboard

You are expected to use Blackboard to check announcements, participate in discussions, check your grades, download documents, and upload your homework. If you need help using Blackboard, please ask the instructor or call the Helpdesk at 972-338-5580.

### Grades on Tests and Homework

Tests are usually graded within two business days. Homework is generally graded within one week. You can monitor your progress in the class by checking “My Grades” in Blackboard.

### Late Homework

A late penalty will be assessed for work turned in after the due date. No work will be accepted after the final exam. Work will not be accepted more than two weeks after the due date.

### Make-up Tests

If you must miss a test, please let the instructor know ahead of time. You must take a make-up test within one week of the original test date. The make-up test must be taken in one sitting. (You can’t leave and come back to finish later.)

### Netiquette

In electronic communication (Discussions and Email), please use complete sentences and explain your thoughts clearly and completely. If I do not respond to an email, it could be that I did not understand what you wrote in the email.

### PowerPoints

Information in the PowerPoints is generally accurate, but small mistakes are possible. Please let the instructor know if you find any mistakes or have any questions about the material in the PowerPoints. If we do not get through all of the material in a PowerPoint in class, it is your responsibility to finish going through the PowerPoint on your own.

## University Policies and Procedures

### **Bad Weather:**

On days that present severe weather and dangerous driving conditions, a decision may be made to close the campus. Please sign up for the JagAlert Emergency Notification system.

<http://www.untDallas.edu/police/resources/jagalert>

If you have already signed up, make sure your information is up-to-date.

### **Children on Campus:**

University policy does NOT allow you to bring your children to class. The university policy states, "UNT Dallas students may not bring children to campus and leave them unattended. UNT Dallas students may not bring children to campus and take them to class."

### **Class Attendance:**

You are expected to attend class! The university policy states that UNT Dallas "recognizes that student success is promoted by the expectation of regular attendance and participation in class. Regular and punctual attendance at all scheduled classes is expected."

### **Course Drop**

Courses dropped prior to the census date will not appear on the student's transcript. If a course is dropped after the census date but prior to the end of the sixth week, the faculty member will assign a grade of W. No student will be allowed more than six grades of W other than the exceptions on the university's website.

### **Students with Disabilities (ADA Compliance):**

The University of North Texas Dallas is on record as being committed to both the spirit and letter of federal equal opportunity legislation; reference Public Law 92-112 – The Rehabilitation Act of 1973 as amended. With the passage of new federal legislation entitled Americans with Disabilities Act (ADA), pursuant to section 504 of the Rehabilitation Act, there is renewed focus on providing this population with the same opportunities enjoyed by all citizens.

As a faculty member, I am required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Student responsibility primarily rests with informing faculty of their need for accommodation and in providing authorized documentation through designated administrative channels. For more information, you may visit the Student Life Office, Suite 200, Building 2 or call 972-780-3632.

The Department of Teacher Education is committed to full academic access for all qualified students, including those with disabilities. In keeping with this commitment and in order to facilitate equality of educational access, faculty members in the department will make reasonable accommodations for qualified students with a disability, such as appropriate adjustments to the classroom environment and the teaching, testing, or learning methodologies when doing so does not fundamentally alter the course.

If you have a disability, it is your responsibility to obtain verifying information from the Office of Student Life and to inform me of your need for an accommodation. Grades assigned before an accommodation is provided will not be changed. Information about how to obtain academic accommodations can be found in UNTD Policy 7.004, [Disability Accommodations for Students](#), and by visiting Student Life, building 2, Suite 200. 972-780-3632, [studentlife@unt.edu](mailto:studentlife@unt.edu).