

UNIVERSITY OF NORTH TEXAS AT DALLAS
COURSE SYLLABUS
Fall 2015

MATH 1352-001 Algebra for Teachers 3 Credit Hours	
Department: Mathematics and Information Sciences	
Division: Liberal Arts and Life Sciences	
Instructor Name:	Dr. Gwendolyn Johnson
Office Location:	Bldg 2 room 232
Office Phone:	972-338-1320
Email Address:	Gwendolyn.johnson@untDallas.edu
Office Hours:	Mondays noon to 1:00 and 2:30 to 3:00 Tuesdays noon to 1:00 and 2:30 to 5:30 Wednesdays noon-1:00 and 2:30 to 5:30 Thursdays noon to 1:00 and 2:30 to 3:00 Fridays by appointment and email
Classroom Location:	Bldg 2 room 240
Class Meeting Times:	Mondays and Wednesdays 1:00 to 2:20
Course Catalog Description:	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
Textbook:	<i>Developing Essential Understanding of Algebraic Thinking for Teaching Mathematics in Grades 3-5</i> . National Council of Teachers of Mathematics.
Prerequisites:	TSI-Math complete or MATH 1010 with a grade of C or better
Learning Resources:	Blackboard Learn: https://learn.unt.edu/ 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
Five Tests (125 points each)	625
Final Exam	200
Four Homeworks (25 points each)	100
Attendance and Participation	75
Total:	1,000

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
Aug 24-26	What is a function?	Function tables, expressions, equations
Aug 31-Sep 2	Dep. and indep. variables, domain and range	Jumping Jacks Activity
Sept 7-9	No class due to Labor Day.	Review and practice problems
Sept 14-16	Test: Functions	Simplify expressions, plug in values, sequences
Sept 21-23	Solving equations and inequalities	Factoring and FOIL
Sept 28-30	Review and practice problems	Test: Equations and Factoring
Oct 5-7	Graphing linear functions, $y = mx + b$	Skate Rental Activity
Oct 12-14	Graphing inequalities, slopes of parallel lines	Matching Representations Activity
Oct 19-21	Go over practice problems	Test: Graphing Linear Functions
Oct 26-28	Mathematical modeling	Class is online
Nov 2-4	Mathematical modeling	Class is online
Nov 9-11	Go over practice problems	Test: Modeling
Nov 16-18	Systems	Areas of Rectangles Activity
Nov 23-25	Quadratics	Class is online
Nov 30-Dec 2	Go over practice problems	Test: Systems and Quadratics
Mon Dec 7	Final Exam	

University Policies and Procedures

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.

Student Evaluation of Teaching Effectiveness Policy:

The Student Evaluation of Teaching Effectiveness (SETE) is a requirement for all organized classes at UNT. This short survey will be made available to you at the end of the semester, providing you a chance to comment on how this class is taught. I am very interested in the feedback I get from students, as I work to continually improve my teaching.

Academic Integrity:

Students are expected to abide by the University's code of conduct and Academic Dishonesty policy. Any person suspected of academic dishonesty (i.e., cheating or plagiarism) will be handled in accordance with the University's policies and procedures. Refer to the Student Code of Conduct at http://www.unt.edu/csr/student_conduct/index.html for complete provisions of this code.

Bad Weather Policy:

On those days that present severe weather and driving conditions, a decision may be made to close the campus. In case of inclement weather, call UNT Dallas Campuses main voicemail number (972) 780-3600 or search postings on the campus website www.unt.edu/dallas.

Diversity/Tolerance Policy:

Students are encouraged to contribute their perspectives and insights to class discussions. However, offensive & inappropriate language (swearing) and remarks offensive to others of particular nationalities, ethnic groups, sexual preferences, religious groups, genders, or other ascribed statuses will not be tolerated. Disruptions which violate the Code of Student Conduct will be referred to the Center for Student Rights and Responsibilities as the instructor deems appropriate.