EDEE 3350: Teaching Mathematics in Grades EC-6	
Instructor: Dr. Queshonda Kudaisi, Ph.D.	**Preferred Name and Pronouns:** Dr. Kudaisi (Coo-dice-e) or Dr. K
Office location 218G	**Office hours** Mondays: 8:00-9:00am Tuesdays: 9:30 - 11:00am; 1:50-2:20 pm
Contact info Queshonda.kudaisi@unt.edu Please allow 24 hours for email responses during weekdays. Responses will not be sent between 7pm and 8am on weekdays or on weekends.	**Class Meetings** Tuesdays 11:00-1:50

CATALOG DESCRIPTION

This course is designed to prepare preservice teachers to teach mathematics to diverse student populations in EC-6 grade classrooms. Students will become familiar with the national and state standards in mathematics that outline the mathematics that students should learn across grade levels and the mathematical processes they should be engaged in while learning them. Most importantly, students in this course will learn methods of teaching mathematics that are equity and asset-based, rigorous, foster children's positive mathematics identity development, and transform math classrooms into spaces that challenge marginality and use mathematics as a tool to critically examine the world.

PREREQUISITES

Must be admitted to teacher education program: Must be taken in Block B; Requires field hours at an offsite location.

COURSE GOALS

This course is designed to help you transition from being a learner of mathematics to a teacher of mathematics.

In this course we will explore three themes: What mathematics? For whom? For what purpose? (Aguirre, Mayfield-Ingram, & Martin, 2013):

1. What mathematics?
    - What mathematics concepts are children expected to learn in school and when? How can we teach these concepts in ways that are relevant to students' lives?
    - What mathematical understandings do children bring to the classroom and how can we leverage those in our mathematics instruction?
    - What mathematics standards and resources can teachers draw from when developing and implementing mathematics lessons?

- What teaching practices can we use to promote equitable and rigorous mathematics teaching and learning?

2. For Whom?
   - Who is a mathematician? What popular myths and stereotypes are associated with who is or isn't mathematically competent?
   - How are our mathematics identities shaped by our mathematics learning experiences, and how does that consequently impact our teaching of mathematics?
   - How do we center the experiences, identities, and mathematical understandings of all students?
   - How do we teach mathematics to students from different (e.g., cultural, racial, social, and linguistic) backgrounds?
   - How do we partner with parents and communities in our mathematics teaching and learning?

3. For What Purposes?
   - Why is mathematical literacy important? How can we explore the beauty and power of mathematics with our students?
   - What is the role of assessment and how can we learn to assess students effectively?
   - In what ways can we promote humanizing mathematics instruction?
   - How can we provide opportunities for our students to engage with mathematics in ways that allow them to critically examine their world?

COURSE TEXTS

Required:

Aguirre, J., Mayfield-Ingram, K., & Martin, D. (2013). *The impact of identity in K-8 mathematics: Rethinking equity-based practices*. The National Council of Teachers of Mathematics. **(ebook available through the UNT Library)**

van de Walle, J., Karp, K., & Bay-Williams, J. (2019). *Elementary and Middle School Mathematics: Teaching Developmentally* (10th ed.). Boston: Pearson Education, Inc.

Recommended:
Yeh, C., Ellis, M. & Koehn Hurtado, C. (2017). Reimagining the mathematics classroom: Creating and sustaining productive learning environments. The National Council of Teachers of Mathematics. (ebook available through the UNT Library)

Carpenter, T., Fennema, E., Franke, M. L., Levi, L., & Empson, S. B. (2015). *Children's mathematics: Cognitively Guided Instruction*. Portsmouth, NH: Heinemann. 2nd Edition

National Council of Teachers of Mathematics – Student e-Membership
(http://www.nctm.org/Membership/Membership-Options-for-Individuals/)

- Sign up for student membership
- Membership includes complimentary registration to regional meetings, e-access to all journals and learning resources, and 30% discount on purchases through the web site.

Electronic Resources:
National Council of Teachers of Mathematics: www.nctm.org
Math TEKS: http://ritter.tea.state.tx.us/rules/tac/chapter111/index.html
Common Core Math Standards: http://www.corestandards.org/Math/

Course Canvas Page: https://unt.instructure.com

Educator Standards this Course Addresses:
TEA Educator Standards
English as a Second Language
ELPS
Technology Applications Standards
Texas Prekindergarten Guidelines

COURSE ASSIGNMENTS

Every week you will be evaluated on your participation and engagement with our class activities and discussion of course readings. In-class activities will include opportunities to practice aspects of teaching mathematics in an EC-6 classroom (e.g., leading number talks and other types of warm-ups, creating math stations and anchor charts, teaching mini-lessons, engagement with math manipulatives etc.). In the table below you will find a brief description of the additional assignments in this course. Full descriptions can be accessed on our class Canvas page.

ASSIGNMENT OVERVIEW
Class Participation and Attendance Regular attendance and active participation are required for this course. Participation will also require consistent reflections over the course readings, in class activities, and discussions and the completion of TExES Practice exam questions.
Math Autobiography and Interview You will reflect over your own math learning experiences and formulate a math autobiography that details those experiences. You will also present the math story of a significant person in your life (e.g., parent, grandparent, sibling, best friend, partner) after conducting an audio or video interview with that person. Finally, you will compare your experiences with that of your "significant person".
Getting to Know Your Math Learners In this three-part project, you will learn more about the math learners in your placement classroom. Knowing students' academic levels, interests, cultural backgrounds, and learning needs is essential for effective, equitable, and responsive math teaching. You will begin by looking at the class as a whole, then you will focus on

one student. This assignment will also involve asking a child to solve one problem-based math task, taking notes about the child's problem-solving strategies and mathematical understanding, and conveying what you learned to others.
Math Lesson Plan In this semester-long multi-component group assignment, you will develop, internalize, and enact a math lesson plan that incorporates the lived experiences of children in your placement. You will consider modifications that can be made to ensure that you serve all students in your classroom.
Final Reflection In this culminating assignment, you will reflect over what you learned over the course of the semester with specific emphasis on your developing math teacher identity, readings/activities that were especially impactful for your future teaching, and the ways you plan to incorporate what you have learned in your future math classroom.

COURSE EVALUATION

Class Participation and Attendance*	10%
Math Autobiography and Interview	20%
Getting to Know Your Math Learners	30%
Math Lesson Plan	25%
Final Reflection	15%
Total	**100%**

**details can be found under "Course Policies"*

A = 90-100% B = 80-89% C = 70-79% D = 60-69% F = 0-59%

Assignment Policies: All grades/points for assignments are final. If you have any questions about grades/points earned for assignments, make an appointment to see me during office hours or send me an email. I will not discuss grades/points during class time.

All assignments are due on Canvas by 11:59pm on the due date (e.g., an assignment due on February 13 is due by 11:59pm on February 13).

All assignments must be submitted in the designated area on our class Canvas page. All written items should include a professional standard of spelling, grammar and punctuation. Cohesion of thought, clarity of expression, depth of reading, analysis of issues and relevance of discussion will need to be evident. Standard requirements for each assignment are 12-point font, double-spacing, appropriate APA referencing style, use of headings and subtitles if necessary and reference lists.

When submitting assignments to Canvas, please be sure to upload word documents unless specifically instructed otherwise. Be sure to name your files using the following convention: ***AssignmentName_LastName.FirstName (e.g., MathAutobiography_BrownTabitha for the Math Autobiography***). My general policy is that late work is not preferred but you may submit any assignment within 24 hours past the due date without asking for permission to do so and

without penalty. Assignments submitted beyond that point will incur a 5% point reduction in your grade for each day. If you are having difficulty meeting an assignment deadline, you should let me know as soon as possible so that we can discuss your options.

The following rubric will be used across all assignments for this course unless otherwise specified.

Module Assignment Grading Guide: Unless grading criteria are specified for the assignment	
A score≥90% Excellent	***Exceeds or meets ALL of the following:*** Submission is completed thoughtfully and with depth. It shows a commitment to learning and to the content of this course. It addresses the assignment requirements but also appears to be personally meaningful and/or relevant. Language/communication is professional and appropriate to the audience. Connections are made to other components of the course (e.g., readings, discussions, assignments).
B 80%≤score<90% Good	***Meets most or many of the following:*** Submission addresses the assignment requirements. Language/communication is professional and appropriate to the audience. Connections are made to other components of the course (e.g., readings, discussions, assignments).
C 70%≤score<80% Developing	***Meets some of the following:*** Submission addresses the assignment requirements. Language/communication is professional and appropriate to the audience. Connections are made to other components of the course (e.g., readings, discussions, assignments).
<C <70% Unsatisfactory	***Meets very few or none of the following:*** Submission addresses the assignment requirements. Language/communication is professional and appropriate to the audience. Connections are made to other components of the course (e.g., readings, discussions, assignments). .

COURSE POLICIES

Canvas: Our course Canvas page is the hub where all things related to our course are located. All assignments should also be uploaded there. Please do not email assignments to me. Email

announcements will also be sent from Canvas to your UNT email address so be sure to check your email regularly.

Attendance: This course is designed and organized to be highly collaborative and interactive. Our sessions will involve small and whole group activities and discussions. Therefore, your attendance and participation are essential to the learning of everyone in our course. It is very difficult to be enriched by discussions and collaborations if you are not physically present or prepared for class. University policy 06.039 will be followed for attendance problems. If necessary, you may miss one class and not face penalties related to your grade (thus you are encouraged to save this absence for illness or emergencies that may arise). You must let me know as soon as possible if you will be missing class. It is your responsibility to obtain all notes and handouts missed during your absence. All assignments are due on dates indicated on the syllabus regardless of your absences. In the event that you miss **four or more classes without a valid excuse**, you may receive a failing grade. Chronic tardiness or early will result in the lowering of a final grade at my discretion. Please note: it is your responsibility to drop this course, if necessary.

Course Materials for Class Sessions: It is recommended that you bring a laptop, tablet, and/or notebook to class each session.

COURSE SCHEDULE				
Week	**Date**	**Topics Covered**	**Media***	**Assignments**
1	8/19	Course overview Math and Related Standards Intro to Equity-Based Practices in Mathematics Education		Future Math Teacher Tips Checkpoint #1
2	8/26	Content Early Number Sense Pedagogy Culturally Relevant, Culturally Responsive, & Culturally Sustaining Math Teaching	Early Number and Counting Progression Video IOI Ch 1 What Mathematics? For Whom? For What Purposes? Culturally Relevant Practices in the Elementary Math Classroom (Rounding Up Podcast Episode) or https://open.spotify.com/episode/1cz3NLfEuTe8gq8VaKkkn6	
3	9/9	Content Place Value Pedagogy Culturally Relevant, Culturally Responsive, & Culturally Sustaining Math Teaching	IOI Ch 2: Identities, Agency, and Mathematical Proficiency: What Teachers Need to Know to Support Student Learning Practicing Culturally Responsive Math Teaching (Bonner, 2021)	Math Autobiography-Interview and Reflection
4	9/16	Content Addition, and Subtraction of Whole Numbers Pedagogy Fostering a Sustaining and Productive Math Learning Environment	Addition and Subtraction Progression Video RMC Ch. 1: The Physical and Virtual Environment Classroom Rules Reimagined as Rights of the Learner (Kalinec-Craig and Robles, 2020)	
5	9/23		RMC Ch. 2 Discourse-Rich Environments	Math Classroom Snapshot

			Building a Broader Definition of Participation (Rounding Up Podcast Episode)	
6	9/30	Content Multiplication and Division of Whole Numbers Pedagogy Asset Based Math Teaching Cultivating Mathematical Agency	Progression of Multiplication Video IOI Ch. 5 Building on Students' Strengths Math Teacher Lounge Season 3 Episode 5: Developing an Asset Orientation with Lani Horn	Case Study "Getting to Know You" Interview
7	10/7		Progression of Division Video IOI Ch. 4 Cultivating Mathematical Agency: "He Was Suspended for Being Mexican"	Future Math Teacher Tips Checkpoint #2
8	10/14	Content Algebraic Reasoning and Relations Pedagogy Problem Posing & Problem Solving	Algebra and Representations Progression Video(Up to Grade 6) Just Say Yes to Early Algebra (Stephens et. al, 2015) RMC Ch 3: The Task-Rich Environment Avoiding the Ineffective Keyword Strategy (Karp, Bush, and Dougherty, 2019)	Community Mathematics Exploration Walk & Project Overview
9	10/21	Content Fraction Concepts and Operations Pedagogy Teaching Math to Multilingual Learners & Learners with Disabilities	Fractions Progression Video Creating a Responsive Learning Community for Els (Dong, 2016) Enhancing Tasks for Multilingual Learners (Rounding Up Podcast Episode)	
10	10/28		TD Chapter 6 pg 105-112 TODOS Mathematics for All Video Podcast Episode: Countering Deficit Myths about Students with Disabilities	Math Problem Solving Interview and Mock Parent-Teacher Conference

11	11/4	<u>Content</u> Geometry Concepts Measurement Concepts <u>Pedagogy</u> Assessment	TD: Ch 19 Developing Geometric Thinking and Geometric Concepts IOI Ch. 6 Mathematics Assessment within Equity-Based Practices	
12	11/11		What Children Need to Know about Measurement: DREME Math Website Turning Trucks Into a Meaningful Geometry Exploration (Roscioli & Suh, 2023)	Draft Lesson Plan
13	11/18	<u>Content</u> Data and Statistics Concepts Personal Financial Literacy <u>Pedagogy</u> Engaging Parents, Families and Communities	What Children Need to Know about Data-DREME Math Website The Life and Times of a Third Grade Pencil (Kandel, 2023) IOI Ch. 7 Routine Practices to Engage Parents A praxis approach to financial literacy education (Blue & Grootenboer, 2019) IOI Ch. 8 Partnering with Families and Communities	
11/24 THANKSGIVING BREAK (NO CLASS)				
14	12/2	Micro-Lesson Presentations		Final Lesson Plan and Reflection
Finals Week				Final Reflection Future Math Teacher Tips Checkpoint #3

This course schedule is a guide and may be modified by the instructor.

Educator Standards Addressed in this Course

The UNT Educator Preparation Program curriculum includes alignment to standards identified by the Texas State Board of Educator Certification (SBEC) for beginning educators. These standards are addressed throughout your preparation and assessed through the TExES Certification exams required for your teaching certificate. Additionally, the Commissioner of TEA has adopted these rules pertaining to Texas teaching standards:

Texas Teaching Standards:

Standards required for all Texas beginning teachers fall into the following 6 broad categories:

Standard 1--Instructional Planning and Delivery. Standard 1Ai,ii,iv; 1Bi,ii (Lesson design)

Standard 2--Knowledge of Students and Student Learning.

Standard 3--Content Knowledge and Expertise.

Standard 4--Learning Environment.

Standard 5--Data-Driven Practice.

Standard 6--Professional Practices and Responsibilities.

Standards, Domains, and Competencies for the EC-6 CORE SUBJECTS-Math

Competency 001: (Mathematics Instruction) The teacher understands how students learn mathematical skills and uses that knowledge to plan, organize and implement instruction and assess learning. (1A-1N)

Competency 002: (Number Concepts and Operations): The teacher understands concepts related to numbers, operations and algorithms and the properties of numbers. (2F, 2J)

Competency 006: (Mathematical Processes): The teacher understands mathematical processes and knows how to reason mathematically, solve mathematical problems and make mathematical connections within and outside of mathematics. (6A-6N)

Pedagogy and Professional Responsibilities Standards (EC-Grade 12)

Domain I. Designing Instruction and Assessment to Promote Student Learning

Competency 001: The teacher understands human developmental processes and applies this knowledge to plan instruction and ongoing assessment that motivate students and are responsive to their developmental characteristics and needs. (I.001.A-C, I.001.F, I.001.K, I.001L, I.001P)

Competency 002: The teacher understands student diversity and knows how to plan learning experiences and design assessments that are responsive to differences among students and that promote all students' learning. (I.002.A-F)

Competency 003—The teacher understands procedures for designing effective and coherent instruction and assessment based on appropriate learning goals and objectives. (I.003.A, I.003.E)

Competency 004—The teacher understands learning processes and factors that impact student learning and demonstrates this knowledge by planning effective, engaging instruction and appropriate assessments. (I.004.E, I.004.F, I.004J)

Domain II. Creating a Positive, Productive Classroom Environment

Competency 005: The teacher knows how to establish a classroom climate that fosters learning, equity and excellence and USES this knowledge to create a physical and emotional environment that is safe and productive. (II.005.A, B, II.005.E, II.005.G)

Domain III. Implementing Effective, Responsive Instruction and Assessment

Competency 007: The teacher understands and applies principles and strategies for communicating effectively in varied teaching and learning contexts. (III.007.A, B)

Competency 008: The teacher PROVIDES appropriate instruction that actively ENGAGES students in the learning process. (III.008.C)

Competency 009: The teacher INCORPORATES the effective use of technology to plan, organize, deliver, and evaluate instruction. (III.009.E, F)

Competency 010: The teacher monitors student performance and achievement; PROVIDES students with timely, high-quality feedback; and RESPONDS flexibly to promote learning for all students. (III.010.C)

Domain IV. Fulfilling Professional Roles and Responsibilities

Competency 011: The teacher understands the importance of family involvement in children's education and knows how to interact and communicate effectively with families. (11B, 11D, 11F)

UNT's Standard Syllabus Statements

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 unt.edu/success and explore unt.edu/wellness. To get all your enrollment and student financial-related questions answered, go to scrappysays.unt.edu.

Plagiarism and Artificial Intelligence
Generative Al programs often produce text that is plagiarized: it takes words and ideas from sources without attribution. Your credibility as a writer and student relies on both generating your own ideas in your own words and giving attribution (credit) to sources. However, most of the assignments in this class require reflection and original ideas (e.g. lesson plans). See **Academic Integrity Standards and Consequences** (p. 14) regarding UNT policy on plagiarism.

Academic Integrity and Academic Dishonesty

Academic Integrity is defined in the UNT Policy on Student Standards for Academic Integrity. Academic Dishonesty includes cheating, plagiarism, forgery, fabrication, facilitating academic dishonesty, and sabotage. Any suspected case of Academic Dishonesty will be handled in accordance with university policy and procedures. Possible academic penalties range from a verbal or written admonition to a grade of "F" in the course. Further sanctions may apply to incidents involving major violations. The policy and procedures are available at: Academic Integrity Policy (PDF) (https://policy.unt.edu/policy/06-003).

AI

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 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 (https://policy.unt.edu/policy/06-003).

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 class 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. The Code of Student Conduct can be found at UNT Policy 07.012 Code of Student Conduct.

ADA Accommodations

The University of North Texas makes reasonable accommodations for students with disabilities. To request accommodations, you must first register with the Office of Disability Access (ODA) by completing an application for services and providing documentation to verify your eligibility each semester. Once your eligibility is confirmed, you may request your letter of accommodation. ODA will then email your instructor a letter of reasonable accommodation, initiating a private discussion about your specific needs in the course. You can request

accommodations at any time, but it's important to provide ODA notice to your instructor as early as possible in the semester to avoid delays in implementation. Keep in mind that you must obtain a new letter of accommodation for each semester and meet with each faculty member before accommodations can be implemented in each class. You are strongly encouraged to meet with faculty regarding your accommodations during office hours or by appointment. Faculty have the authority to ask you to discuss your letter during their designated office hours to protect your privacy. For more information and to access resources that can support your needs, refer to the Office of Disability Access website (https://studentaffairs.unt.edu/office-disability-access).

EagleConnect

All UNT students should activate and regularly check their EagleConnect (e-mail) account. EagleConnect is used for official communication from the University to students. Many important announcements for the University and College are sent to students via EagleConnect. For information about EagleConnect, including how to activate an account and how to have EagleConnect forwarded to another e-mail address, visit https://eagleconnect.unt.edu. This is the main electronic contact for all course-related information and/or material.

Emergency Notifications 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.

Observation of Religious Holy Days

If you plan to observe a religious holy day that coincides with a class day, please notify your instructor as soon as possible.

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 students' 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.

Sexual Discrimination, Harassment, & Assault

UNT is committed to providing an environment free of all forms of discrimination and sexual harassment, including sexual assault, domestic violence, dating violence, and stalking. If you (or someone you know) has experienced or experiences any of these acts of aggression, please know that you are not alone. The federal Title IX law makes it clear that violence and harassment based on sex and gender are Civil Rights offenses. Because of Texas Senate Bill 212, as a UNT employee, I am required by law to report sexual misconduct, relationship violence, stalking, and

crimes. I cannot keep those things confidential if you reveal any of those to me. If you need a confidential resource available on campus or in the local community then I can refer you.

UNT has staff members trained to support you in navigating campus life, accessing health and counseling services, providing academic and housing accommodations, helping with legal protective orders, and more.

UNT's Dean of Students' website offers a range of on-campus and off-campus resources to help support survivors, depending on their unique needs: http://deanofstudents.unt.edu/resources_0. UNT's Student Advocate can be reached through e-mail at SurvivorAdvocate@unt.edu or by calling the Dean of Students' office at 940-565-2648. You are not alone. We are here to help.

Student Perceptions of Teaching (SPOT)

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 and 14 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 at www.spot.unt.edu or email spot@unt.edu.