EDEE 3350: Teaching Mathematics in Grades EC-6	
Instructor: Heather Steen	**Preferred Name and Pronouns: Professor Steen/Ms Steen/Heather (she/her)**
Office location: Denton Campus, MH (I am only on campus for class days)	**Office hours: Before and after class and by appointment/email/Zoom**
Contact info: heather.steen@unt.edu	**Class Meetings: Mondays, 9:00-11:50 – MH 108**

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

Corequisite(s): EDCI 4010; EDSP 4350; EDRE 4850; EDRE 4860

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 especially those from traditionally marginalized groups in mathematics?
- How do we teach mathematics to students from diverse 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 has mathematics been used to oppress groups of students and how 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 and confront social injustices?

This course is not designed to turn you into an expert mathematics teacher. Instead, it aims to help you become a *well-started novice*: a prospective teacher who has thought hard about some of the central questions in mathematics learning and teaching, who has ideas about these questions that they can defend articulately using applicable research, who knows about reformed-based mathematics teaching and resources available to teachers, and who has the tools needed to become an advocate of and agent for equitable and justice-oriented mathematics education.

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**)

Recommended:

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

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. Here is a brief description of the assignments in this course. Full descriptions can be accessed on our class Canvas page.

MAJOR ASSIGNMENTS
Math Autobiography and Interview You will present your math autobiography that details your experience learning mathematics as a child. 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".
Case Study Project In this project, you will learn more about one individual in your class, their home and community experiences, and how those might relate to mathematics learning. It is also an opportunity to practice eliciting, interpreting, and assessing students' thinking about mathematics.

Community Walk & Math Lesson Plan

In this semester-long multi-component group assignment, you will develop a math lesson plan that incorporates the lived experiences of children in your placement. You will consider modifications that can be made to serve specific groups of students (e.g., emergent bilinguals) and the ways that this lesson can be extended to address a social justice issue relevant to the children in your placement, their families and communities.

COURSE EVALUATION

Attendance*	10%
Math Autobiography and Interview	20%
Case Study Project	20%
Community Walk & Math Lesson Plan	35%
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 12 is due by 11:59pm on February 12).

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. In the event that 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 with a valid excuse (see university policy for excused absences) 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. A second absence will result in a loss of points from the total grade (see table below). In the event that you miss **four or more classes**, you will receive a failing grade. Students who miss more than one hour of class will be considered absent from that class meeting. Chronic tardiness or early departure (arriving more than 15 minutes late or leaving more than 15 minutes 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.

# of Absences	**Total participation points for the class** *(out of 10 points)*
0 – 1	10
2	7
3	3
4 or more	You will automatically receive an F for your final grade

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.

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

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)

Department of Teacher Education and Administration: Preparing Tomorrow's Educators and Scholars

The **Department of Teacher Education and Administration** seeks to improve educational practice through the generation of knowledge and to prepare education professionals who serve all students in an effective, inclusive and equitable manner. Its focus is on the preparation of highly competent educators, researchers and administrators who employ current theory and research as they fill these important roles.

Mission

The Department of Teacher Education and Administration integrates theory, research, and practice to generate knowledge and to develop educational leaders who advance the potential of all learners.

Vision

We aspire to be internationally recognized for developing visionary educators who provide leadership, promote social justice, and effectively educate all learners.

UNT TEACHER EDUCATION PROGRAM
COMMITMENTS

While teaching has always been a relational and intellectual endeavor, we acknowledge that *teaching is also both an ethical and a political act.* We recognize that many of the practices and traditions in schools today perpetuate long-seated historical and social oppressions. These social inequities are structural *and* socially constructed along dimensions of intersecting identities, including, but not limited to, race, color, ethnicity, national origin and identity, dis/ability, gender identity and expression, sex, sexual orientation, religion, immigration status, language, social class, age, and genetic orientation.

It is through our radical imaginations that we can create spaces for critical inquiry and engagement in schools at multiple levels: intellectual, ethical, physical, social, emotional, ecological, and aesthetic. We envision classrooms to be inclusive places that serve as complex and just ecosystems that allow for multiple identities, modes of expression, and ways of engagement to thrive together. We do this because we are committed to dismantling oppression. Teachers play an important role in this movement. Our teacher education program supports the development of core values related to:

- **Identity.** Preparing teachers who have agency and critically reflect on their lived experiences and identities as a way of informing their professional knowledge and humanizing pedagogies.
- **Inquiry.** Preparing teachers who value and inquire into the complex identities, as well as intellectual and transformational capacities, of children and youth.
- **Activism.** Preparing teachers who create curriculum that responds to children's and youth's inquiries and identities, as well as the sociopolitical and socioeconomic conditions of the world outside of schools—in neighborhoods, communities, and society-at-large.
- **Community.** Preparing teachers who recognize and honor the unique sociocultural experiences and communities of children and youth with whom they work.

We commit to teaching and teacher preparation that takes a transformative stance toward school change. We believe—acting in solidarity with teachers, children, youth, school leaders, and communities—we can radically reimagine and reconstruct schools and, thus, our society.

Teacher Preparation at The University of North Texas
Core Commitments

Commitments->	As Teachers	To Children and Youth	In our Practice	To Radically Imagine
Identity	**We are** individuals with cultural histories, knowledges, talents, and interests that we use as resources in our teaching.	**We value** and nurture the love, grace, humor, compassion, creativity, patience, joy, and peace young people bring into our teaching spaces.	**We practice** humanizing pedagogies that are asset-based, equitable, and appreciative of who we are and who we are becoming.	**We imagine** schools as spaces where teachers are encouraged and given space to be different in what they do with young people and their communities.
Inquiry	**We are** intellectuals with a deep understanding of	**We value** young people's knowledge, creativity, curiosity,	**We practice** curriculum as critical inquiry	**We imagine** a curriculum in schools that is

	academic content, curriculum development, and flexible pedagogies.	aesthetics, imagination, and embodied ways of being as essential, educative and liberating	and research where children and youth are positioned as capable, knowledgeable and social agents for change.	shaped by societal goals and influenced daily by events unfolding in the world around us.
Advocacy & Activism	**We are** activists working against injustice for young people, teachers, and communities rooted in racism and other forms of discrimination.	**We value** and embody caring in all its forms – personal, social, cultural, linguistic, and ecological – as essential to growing a positive learning and living environment.	**We practice** activism in the curriculum by engaging children and youth in work that contributes to the creation of more just, more caring, and more peaceful world.	**We imagine** metaphors for schools as nurturing spaces for the whole individual rather than as efficient factories or businesses that produce products and profit.
Communities	**We are** members of a multiple communities— conne cted in ways that make our successes intertwined.	**We value** inclusive learning communities that connect us within and outside of our classrooms.	**We practice** humility through our vulnerability; hope in the face of adversity; and resilience in response to our efforts that have fallen short.	**We imagine** schools as sustaining intersecting ways of being, knowing, and languaging.

Department Syllabus Statements

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

Sexual Assault Prevention. UNT is committed to providing a safe learning environment free of all forms of sexual misconduct. Federal laws and UNT policies prohibit discrimination on the basis of sex as well as sexual misconduct. If you or someone you know is experiencing sexual harassment, relationship violence, stalking and/or sexual assault, there are campus resources

available to provide support and assistance. The Survivor Advocates can be reached at SurvivorAdvocate@unt.edu or by calling the Dean of Students Office at 940-565- 2648.

UNT's Standard Syllabus Statements

Academic Integrity Standards and Consequences. 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 Accommodation Statement. UNT makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (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 ODA website at disability.unt.edu.

Emergency Notification & 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 Blackboard for contingency plans for covering course.

UNT's Course Policies

Attendance

Students are expected to attend class meetings regularly and to abide by the attendance policy established for the course. It is important that you communicate with the professor and the instructional team prior to being absent, so you, the professor, and the instructional team can discuss and mitigate the impact of the absence on your attainment of course learning goals. Please inform the professor and instructional team if you are unable to attend class meetings because you are ill, in mindfulness of the health and safety of everyone in our community.

This course syllabus is intended to be a guide and may be amended at any time by the instructor.