



MTH 377 Math for Elementary Teachers II

Lezlie Coad

UNITED TRIBES TECHNICAL COLLEGE

COURSE INFORMATION

This course is the second in a series of three courses designed to develop the necessary foundations in mathematics for prospective elementary teachers. Topics will include North Dakota Standards for teaching mathematics, properties of geometric shapes, measurement, triangle congruence and similarity, geometric constructions, Cartesian coordinates, symmetry, and selected topics from probability and statistics. Throughout the course, the five process standards recommended by the National Council of Teachers of Mathematics Principles and Standards (problem solving, reasoning, communication, connections, and representation) will be emphasized.

Credits: 3

Pre/Corequisites:

- Prerequisite: MTH 277

CLASS INFORMATION

Section Number: A

Term: Spring Year: 2025 Start Date: 1/14/2025 End Date: 5/2/2025

Meeting Times: Tuesday & Thursday 1:00 - 2:20 PM

Delivery Mode: Face to Face

INSTRUCTOR

Lezlie Coad

Email: lmcelwee@uttc.edu

Office Phone: (701) 221-1752

Mobile Phone: (701) 400-6782

Office Location: Main Education Building 122

Office Hours:

MWF 9:00 - 11:00 AM TTh 9:00 AM - 12:00 PM

TEXTBOOKS

Bassarear, T., & Moss, M., (2019). *Mathematics for Elementary School Teachers* (7th Edition). Boston, MA: Cengage

INSTITUTIONAL LEARNER OUTCOMES

Quantitative & Scientific Reasoning: Develop solutions to mathematical and scientific problems.

PROGRAM OUTCOMES

PLO 4 Demonstrate understanding of content knowledge.

EXTERNAL STANDARDS

Council for the Accreditation of Educator Programs (CAEP) Standards

Target Standards

CAEP Standard 1: Content and Pedagogical Knowledge

The provider ensures that candidates develop an understanding of the critical concepts and principles of their discipline and facilitates candidates' reflection of their personal biases to increase their understanding and practice of equity, diversity, and inclusion. The provider is intentional in the development of their curriculum and clinical experiences for candidates to demonstrate their ability to effectively work with diverse P-12 students and their families.

R1.2 Content The provider ensures candidates are able to apply their knowledge of content at the appropriate progression levels.

InTASC Standards

Target Standards

InTASC Standard #4: Content Knowledge

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

InTASC Standard #6: Assessment

The teacher candidate understands and uses multiple methods of assessment to engage learners in their own growth, to monitor learner progress, and to guide the teacher's and learner's decision making.

North Dakota Knowledge and Practice Standards for Teachers of Reading

North Dakota Program Approval and Teacher Education Standards

Target Standards

50015 Elementary Education:

STANDARD 3 – Assessing, Planning, and Designing Contexts for Learning

Candidates assess students, plan instruction and design classroom contexts for learning. Candidates use formative and summative assessment to monitor students' learning and guide instruction. Candidates plan learning activities to promote a full range of competencies for each student. They differentiate instructional materials and activities to address learners' diversity. Candidates foster engagement in learning by establishing and maintaining social norms for classrooms. They build interpersonal relationships with students that generate motivation and promote students social and emotional development.

Components

50015.3c Candidates plan instruction including goals, materials, learning activities and assessments.

Standard 4 – Effective Instruction.

Candidates make informed decisions about instruction guided by knowledge of children and assessment of children's learning that result in the use of a variety of effective instructional practices that employ print, and digital appropriate resources. Instruction is delivered using a cohesive sequence of lessons and employing effective instructional practices. Candidates use explicit instruction and effective feedback as appropriate and use whole class discussions to support and enhance children's learning. Candidates use flexible grouping arrangements, including small group and individual instruction to support effective instruction and improved learning for every child.

Components

50015.4f Candidates effectively organize and manage small group instruction to provide more focused, intensive instruction and differentiate teaching to meet the learning needs of each child.

COURSE OBJECTIVES

1. Demonstrate mathematical knowledge to solve problems.
2. Relate operations and algorithms involving numbers to algebraic procedures.
3. Reflect on the connections between mathematical ideas and understanding.
4. Utilize a variety of concrete and visual representations to demonstrate mathematical understanding in small group activities.
5. Create digital activities to teach mathematical strategies.

A. GRADING SCALE

Grade	Percentage
A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	Below 60%

B. COMMUNICATION

Email is the official means of communication at UTTC. Information Technology (IT) will assign all students an official UTTC email address. All correspondence from the College to the student will be sent to the student's UTTC email

address. Students are expected to check their email regularly and are responsible for all information sent to them via their UTTC email address. Faculty expect students to use their official email address for all instructional purposes, including communicating with the faculty.

C. ATTENDANCE

Students at UTTC are expected to participate in all of their class sessions and are expected to communicate with their instructors regarding any emergencies that cause them to miss class. Regardless of the circumstances, the student is responsible for obtaining any information missed because of the absence and completing any outstanding assignments. The student may refer to the course assignments in [My.UTTC.edu](https://my.uttc.edu), contact another student enrolled in the course, or meet with the course instructor during office hours to get the missing information. Attendance is entered as “Present”, “Absent-Unexcused”, or “Excused” (college-sanctioned absences).

D. LATE ASSIGNMENT SUBMISSIONS

UTTC supports and fosters the student’s responsibility for completing and submitting assignments on or before scheduled due dates and times. If an assignment is due, the student should make every effort to submit the assignment on time. Occasionally, a student may experience an unexpected life event that results in the submission of late work. Communication is the key. Instructors are more than willing to work with students in the event of an emergency if the student communicates with them before the date and time the assignment is due to make other arrangements. Late assignment deadlines will vary among departments but will not exceed more than five (5) business days after which the assignment was initially due. Assignment due dates, late assignment deadlines, and late assignment penalties are outlined in course syllabi. Assignments not submitted by the initial deadline date will be reflected in the course gradebook as a zero (0) until the assignment has been submitted. The amount of points deducted for late work is at the discretion of the instructor. Assignments submitted via E-mail will not be accepted under any circumstances and will receive a grade of zero.

E. MISSED TEST, EXAMS AND QUIZZES (FORMAL ASSESSMENTS)

Students may not make up a missed test, exam or quiz without a valid reason for their absence (illness, family emergency). It is the student’s responsibility to contact their instructors before the absence, or within 24 hours after missing the formal assessment. The instructor will review the reason the student missed and determine if the circumstance justifies the student being allowed to take the formal assessment. Approved make-up assessments must be taken outside of the student’s regular class schedule and during a time and location agreed upon between the student and instructor. Students are not to miss another class in order to make-up an assessment for another course. If the student fails to show on the date and time of the makeup assessment, the student will not be permitted to reschedule the makeup and the assessment and will earn a 0% grade.

F. THUNDER ALERT SYSTEM

UTTC’s Thunder Alert System (TAS) is a proactive, communication-driven support system that provides timely identification and interventions to work with individual students to assist in generating plans to overcome challenges to college success. The system assists UTTC students by linking them to faculty and staff who can provide and connect students to available resources and strategies. The Thunder Alert serves as an opportunity for students to take ownership of their success and empower them to accomplish academic and personal goals. The system helps faculty and

academic advisors connect and communicate with students as issues arise. The additional cross-wide partnerships create a culture of collaboration focused on the best interest of UTTC students.

Academic-related concerns such as attendance, missing assignments, or classroom behavior will result in a Thunder Alert being issued by faculty. When a Thunder Alert is issued, the student will receive an email requesting them to make arrangements to follow up with the instructor and/or their academic advisor. Students receiving a Thunder Alert should make the necessary arrangements to set up and meet with faculty as soon as possible to generate a plan of success.

G. ACADEMIC HONESTY

Students are expected to complete their own work. Academic dishonesty includes plagiarism; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using course materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to dishonestly obtain grades, honors, awards, or professional endorsement; altering, forging, misrepresenting, or misusing an academic record; or fabricating or falsifying data, research procedures, or data analysis. Refer to [Academic Affairs policies](#) and procedures handbook for further information.

ARTIFICIAL INTELLIGENCE (AI) USE POLICY

Use of generative AI is subject to individual course instructor discretion. Instructors have the authority to:

- Authorize or restrict AI assistance partially or fully
- Define specific limits for individual assignments
- Establish course-wide AI usage policies
- AI use must be explicitly defined and approved by course instructors.
- Generative AI should not:
 - Replace original student work
 - Compromise the evaluation of student learning outcomes
 - Undermine the academic integrity of assignments

Misuse of AI will be considered plagiarism and is subject to consequences outlined in the Student Academic Honesty policy. Examples of AI misuse include:

- Generating entire writing assignments (essays, discussion posts) using AI
- Completing mathematical calculations using AI when computational skills are a learning objective
- Claiming credit for AI-generated content (art, music, program code)
- Using AI in ways not explicitly authorized by the instructor

When in doubt, students are encouraged to consult directly with their course instructors regarding the appropriate use of generative AI.

H. STUDENTS WITH DISABILITIES

United Tribes Technical College recognizes its responsibility for making reasonable accommodations to ensure there is no discrimination on the basis of a disability. The Disabilities Support Services coordinates reasonable accommodations, support services, and appropriate referrals for the purpose of removing barriers and providing an equitable learning environment. If you have a disability, please contact the Disabilities Services (DS) office at (701) 221-1456 or email at dss@uttc.edu.

I. TITLE IX STATEMENT

Title IX is a federal civil rights law that prohibits discrimination on the basis of sex, including sexual harassment, rape and sexual assault. United Tribes Technical College is committed to upholding the law and standards that promote respect and human dignity in a safe environment. Sexual misconduct and relationship violence in any form violates UTTC's mission, cultural values, Student Code of Conduct, and may also violate federal and state law. If you or someone you know has been impacted by sexual assault, dating and domestic violence, stalking, or sexual exploitation, UTTC has resources available on the [Title IX website](#). you can find the appropriate resources on the UTTC campus and in the community

J. DIVERSITY AND EQUITY STATEMENT

United Tribes Technical College values diversity because it enriches the community and wealth of experiences that characterize a post-secondary education. Our students, faculty, and staff come from Tribal lands throughout the United States and Canada. The majority of our students come from the northern plains region of the country, with 70% representing the North Dakota tribes.

UTTC recognizes that diversity is about much more than race, ethnicity or geography. Because students from many Tribal nations are represented at UTTC, from a wide range of cultural and ethnic backgrounds, students are encouraged to share their own cultural practices, traditions, and beliefs in the classroom in an effort to build an inclusive and welcoming community for all individuals and one from which we can learn from one another. We believe engagement with diverse perspectives and ideas is critical to the education and growth of all people, and we value the unique experiences and viewpoints of all of our community members.

EQUITY STATEMENT

United Tribes Technical College (UTTC) believes that access to a high-quality education in an inclusive environment is the right of all individuals and imperative for the continued advancement of a strong democracy and workforce. Equity is ensuring that all students receive what they need to be successful through the intentional design of the college experience.

K. TECHNOLOGY REQUIREMENTS

To ensure that you are using the recommended personal computer configurations, please refer to the [minimal technology requirements](#).

FACE-TO-FACE

PARTICIPATION / CLASS ENGAGEMENT

UTTC prepares students for the workforce by having high expectations for skills demonstrated in the classroom that transfer into future employment. This includes students' ability to be on time for class, to refrain from external distractions (such as cell phone usage or holding side conversations with other students), by providing positive contributions to class discussions, participating in individual or group activities, and being prepared for class.

CELL PHONES and LAPTOPS

Cell phones are turned off during class times out of respect for the other students and the instructor. If a student is expecting an important phone call (e.g. case worker, Housing, clinic), the instructor must be informed ahead of time and the cell phone set to a silent ring. If the call is received during class time, the student will answer the call and quietly step out of the classroom. Students may not use class time to check social media accounts, voicemail, text messages and/or personal emails.

STUDENT BEHAVIOR

UTTC students will conduct themselves in a responsible and respectful manner at all times in the classroom, in the hallways, in the Library, the Cafeteria, and any other location on campus. Student behavior that interferes with learning in the classroom will not be tolerated. This behavior includes chronic tardiness, threatening confrontations, intoxication, inappropriate physical contact, lewd or disrespectful language or gestures directed at the instructor or at fellow students, bullying, direct or indirect intimidation, and conversations with other students that are not related to classroom topics. Faculty are expected to maintain professional management of classroom activities prior to, during and after class times. As such, if a student demonstrates behavior that disrupts or interferes with classroom activities, an instructor reserves the right to ask the student to leave the classroom, to contact campus security, to request mediation by the academic department chair or an academic/personal counselor, or to file a formal complaint subject to a student disciplinary hearing.

BASIC NEEDS

Any student who faces challenges such as having enough food to eat or adequate housing and believes this may affect their attendance or performance in their courses is urged to contact the Wellness counselors for support. You can also notify your instructor for this course if you are comfortable doing so. Your instructor may be aware of additional resources that are available for you.

COURSE CALENDAR

Spring 2025 Schedule

Week	Academic Topic Instructional Strategy	Support Materials, Book chapters, etc.	Assessment (Formative – Summative)
1 Jan 14 - 17	Review Syllabus Math Review	Chapters 1-3	Chapter 1-3 Doodle Notes Reality Math Activity
2 Jan 20 - 24	*No School 1/20 MLK Understanding Multiplication of Whole Numbers	Chapter 4.1	What do you think? Reflections Exercises 4.1
3 Jan 27 - 31	Understanding Multiplication of Whole Numbers Understanding Division of Whole Numbers	Chapter 4.1 Chapter 4.2	Exercises 4.1 - 4.2 What do you think? Reflections

4 Feb 3 - 7	Understanding Multiplication and Division of Fractions	Chapter 4.3	Exercises 4.3 Mango Math
5 Feb 10 - 14	Understanding Multiplication and Division of Decimals and Integers	Chapter 4.4	Exercises 4.4 What do you think? Reflections
6 Fe. 17 - 21	Ratio and Proportion	Chapter 5.1	Exercises 5.1 What do you think? Reflections 7 th Generation Math
7 Feb 24 - 28	*No School 2/17 President’s Day	Chapter 5.2	Exercises 5.2 What do you think? Reflections Short Lesson Plan
	Precents		
8 Mar 3 – 7	Midterm Grades Due 3/7	Chapter 6.1	Exercises 6.1 What do you think? Reflections
	Understanding Patterns, Relations, and Functions		
Mar 10 - 14 Spring Break – No Classes			
9 Mar 17 - 21	Representing and Analyzing Mathematical Situations and Structures Using Algebraic Symbols	Chapter 6.2	Exercises 6.2 What do you think? Reflections
10 Mar 24 - 28	Using Mathematical Models to Represent and Understand Quantitative Relationships	Chapter 6.3	Exercises 6.3 What do you think? Reflections 7th Generation Math Activities
11 Mar 31 – Apr 4	Analyzing Change in Various Contexts	Chapter 6.4	Exercises 6.4 What do you think? Reflections Short Lesson Plan
12 Apr 7 - 11	Collecting, Organizing, and	Chapter 7.1	Exercises 7.1 What do you think?

	Displaying Data		Reflections
13 Apr 14 - 18	*No School 4/18 Good Friday	Chapter 7.2	Exercises 7.2 What do you think? Reflections Mango Math
	Analyzing Data		
14 Apr 21 - 25	Using Data to Make Predictions	Chapter 7.3	Exercises 7.3 What do you think? Reflections
15 Apr 28 – May 2	Finals Week	Chapter 8	Boom Learning Presentations
	Geometry		
GRADES DUE	Grades DUE May 5, 2025, by 5:00 pm		