MATH 228-3
Unlocking the Magic of Math for Future Educators

Tuesday 12:30-1:45 pm; Thursday. 12:30-1:45 pm Virtual meeting
https://wisconsin-edu.zoom.us/j/92222719388
Instructor: Dr. Sinan Kanbir **(Dr. Kanbir)**   **Email:** skanbir@uwsp.edu
Office Hours: Wednesdays 1:00-2:00 pm (Zoom) Tuesdays- 5:00-6:00 pm or by appointment

Credits &Prerequisites: MATH 95 or placement above MATH 95, concurrent registration in MED 228; declared major in elementary education, early childhood education, or special education.**Note:** If you don't meet the prerequisites, you will not be permitted to enroll.

The Journey Ahead

Forget the rote memorization and test anxiety that plagued your past math experiences. This course aims to redefine your relationship with math by diving deep into the core concepts and properties of sets, number systems, and functions, all tailored for future K-8 educators. Prepare to engage in problem-solving, reasoning, and effective communication about mathematics.

Course Objectives
· Cultivate a "deep understanding" of elementary math concepts.
· Develop problem-solving skills through investigation, conjecture, and justification.
· Master the art of explaining your reasoning in both written and verbal formats.
· Collaborate with peers to tackle non-routine problems and share diverse strategies.

Required Materials

Textbook: Beckmann, S. (2018). Mathematics for Elementary Teachers with Activities (5th Edition). Boston: Pearson.

Other Resources (see Library Reserve section or online journal):

Blanton, M. L. (2008). Algebra in elementary classrooms: Transforming thinking, transforming practice. Portsmouth, NH: Heinemann.

Thomas P. Carpenter, Megan Loef Franke and Linda Levi (2003). *Thinking mathematically: Integrating arithmetic and algebra in the elementary school*. Portsmouth, NH: Heinemann. ISBN 0-325-00565-6.

Common Core State Standards for Mathematics**:** Download from website:
http://www.corestandards.org/assets/CCSSI_Math%20Standards.pdf (can be found at your D2L/resources)

https://www.illustrativemathematics.org/content-standards/1

Additional Readings will be available on Canvas.

Course Purpose and Goals: Transforming Your Mathematical Journey

Rethinking Our Relationship with Math

Many of us have been conditioned to view mathematics as a subject of memorization and right answers. This narrow perspective often limits our understanding of what math truly is and how it can be applied. This course aims to shift that paradigm. We will delve into the rich tapestry of problem-solving and reasoning that lies at the heart of mathematics. As aspiring teachers, it's crucial for you to develop a "deep understanding" of the subject matter you will eventually teach. To facilitate this, the course content will go beyond what is typically covered in a K-8 setting.

Our focus will be on several key areas:

Problem-Solving: Engage in investigation, conjecture, and justification.

Conceptual Understanding: Deepen your grasp of fundamental mathematical concepts.

Interconnectedness: Explore how different mathematical ideas relate to each other.

Communication: Hone your ability to articulate mathematical strategies and reasoning, both in writing and verbally.

Active Participation and Commitment

You will be expected to:

- Provide thorough explanations and justifications for your problem-solving approaches.
- Engage actively in the learning process, which includes:
- Studying the material diligently.
- Collaborating with peers.
- Tackling non-routine problems.
- Employing symbolic representation in mathematical reasoning.
- Listening attentively and reflecting on your learning journey.
- Completing traditional tasks like exams and homework assignments.

In summary, this course is designed to be a transformative experience that will reshape your understanding of mathematics and equip you with the skills to inspire future elementary and middle school students.

Course Structure and Tentative Requirements

Attendance (20 points): Attendance and participation are crucial for this course, which explores innovative ways to teach math to children. You're expected to attend all virtual classes. Missing four or more sessions without a valid reason will result in a disposition concern form. Six or more absences will lead to a failing grade. The first three absences are penalty-free; thereafter, each absence will cost you 5 points off your total attendance score. Leaving a virtual meeting early counts as an absence.

Participation (20 points): Active participation is key in this course. This means not just listening and reading (receptive learning) but also speaking and writing (expressive learning). You're expected to engage in both group discussions and class-wide reports. Your grade will reflect your willingness to share ideas and learn from both the instructor and your peers. You should aim to present solutions to the class at least four times during the semester.

Presentation (40 points): You will be required to give two 10-minute presentations during the course. The first will focus on a children's literature book, and the second will cover an article from the journal "Teaching Children Mathematics." Further details will be provided later.

Read-Watch-Write/Reflection (50 points): Throughout the semester, we'll have assigned readings from various sources. You'll need to submit reflection papers about four to five times. The goal is to help you cultivate a habit of self-reflection on your learning and thinking, a skill you may find valuable in your future teaching career.

Homework assignments-Problem Sets : (90 points) You'll be required to complete around ten homework assignments over the course of the semester. These will be digital submissions—no need to print anything out. The assignments will include activities from your textbook as well as materials provided by me. These tasks aim to deepen your understanding of the topics we discuss in class. Specific details for each assignment will be provided when they are assigned.

In-Class Works (50 points): Your participation in virtual meetings will be evaluated during select sessions. No makeup opportunities will be available for these in-class activities; you must be present to earn credit.

Biweekly Quizzes (60 points): Each week, you'll be evaluated on the week's topic through Canvas. These evaluations will cover both homework and in-class materials and will be available in both interactive and digital upload formats.

Quizzes (60 points): There will be two quizzes scheduled regularly throughout the semester via Canvas. Each quiz will be announced in one-week advance.

Mid-Term Exam (50 points): The midterm exam is scheduled for the latter half of the semester and will take up one full 75-minute class session. A study guide will be provided to help you prepare.

Final Examination (80 points): The final examination time will be during finals week. More information about the content will be provided.

E. Grading

This 3-credit hour class requires 6–8 hours of outside-of-class study per week. Make sure you schedule and put in those hours consistently throughout the semester. Your course grade will be calculated on a percentage basis (number of points earned out of the number possible) and assigned a corresponding letter:

93-100% = A	90- 92 % = A-	
86-89% = B+	83-85% = B	80-82% = B-
76-79% = C+	73-75% = C	70-72% = C-
67-69% = D+	63-66% = D	Less than 63% = F

I will not use any kind of judgments to lower your final grade.

MATH 228 -Point Distribution (Dr. Kanbir)

Evaluation Item	Points
Attendance	20
Participation	20
Presentations	40
Read-Watch/Write-Reflection	50
Homework Assignments	80
In-Class work	50
Biweekly Quizzes	50
Scheduled Quizzes	60
Mid-Term Exam	50
Final Exam	80
Total	**500**

During our virtual meetings, it's important to stay focused to get the most out of the class. Using your cell phone for activities like texting, social networking, or browsing the internet is considered unprofessional and disruptive. Such behavior not only affects your own learning but can also impact the group's overall experience. Engaging in these activities may result in a disposition concerns form being filed against you. Therefore, please keep distractions to a minimum and remain present throughout the meeting.

Disposition Concerns: The Mathematical Sciences Department is committed to the high-quality preparation of future teachers, and we expect you to approach your training with equal seriousness. Your performance will be evaluated based on several key disposition indicators:

Collaboration: Ability to work effectively in a team.

Honesty/Integrity: Demonstrating truthfulness and moral excellence.

Respect: Showing consideration for yourself and others.

Emotional Maturity: Managing your emotional state to stay engaged.

Reflection: Ability to evaluate past decisions for future improvement.

Responsibility: Demonstrating accountability and sound judgment.

Failure to meet these expectations, particularly through poor attendance, consistent tardiness, or not completing assignments, may result in a disposition concern form being filed against you. These behaviors are considered signs of a lack of commitment and responsibility.

If you have a documented disability and require accommodations, please contact Disability Concerns at 715-346-3365 or email datctr@uwsp.edu. You can also fill out a Request for Services form available on their website. For additional resources, visit the Assistive Technology website.