

**ELED 4313.003**  
**Teaching Mathematics in the Elementary School**  
**Thursday from 5pm to 6:20pm**  
**Panola College in MONK 1302**  
**Fall 2022**

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**Office Hours:** Thursday from 2pm to 5pm by appointment only

**Course Overview:**

Scope and sequence of the elementary mathematics curriculum, materials, and selected instructional techniques.

**Prerequisites:** MATH 1350, MATH 1351, EDUC 3310 and EPSY 3330, admission to Educator Preparation Program. Field Based course

**Student Learning Outcomes:**

The students will:

- Demonstrate an understanding of mathematical content from the elementary school grade levels. (3.A)
  - o Number concepts and operation
  - o Algebraic thinking
  - o Geometry
  - o Measurement
  - o Probability and statistics
- Demonstrate an understanding of mathematical processes and reason mathematically. (3.A, 3.C)
- Solve mathematical problems and make connections within and outside of mathematics. (3.A, 3.C)

Learning Outcomes	Activities	Assessment	Standards
Demonstrate an understanding of teaching mathematics in the elementary classroom	Small group activities Lesson planning	Lesson plan Cross Curricular Instruction Assignment Quiz/Tests	Texas Educator Standards: 1bii, 1biii, 1ci; 2bi, 2bii, 2biii, and 2cii; 3ai, 3aii, 3aiii, 3bi, 3bii, 3biii, 3ci, 3cii, and 3ciii INTASC Standards: 1, 2, 4, 5 and 8

Demonstrate an understanding of mathematical processes and reasoning		Homework problems Class problem solving tasks Learning Center Presentation	TEKS: Math process standards K-6 INTASC: 4, 5 Texas Educator Standards: 3A, 3C CCRS: Math VII, IX
Solve mathematical problems and make connections within and outside of mathematics	Class problem solving activities	Homework problems Class problem solving tasks Math Scavenger Hunt	TEKS: Math K-6 INTASC: 4, 5 Texas Educator Standards: 3A, 3C CCRS: Mathematics X

### **Teaching Models and Strategies:**

The following instructional models will be utilized in class:

- inquiry
- teacher-directed
- cooperative learning

The following constructivist teaching strategies will be incorporated in class:

- reflective thinking
- technology integration
- critical thinking
- problem solving
- communication
- manipulative-based
- patterns and relationships

Strategies will be presented that address the academic and linguistic needs of children.

### **Required Textbooks and Readings:**

Reys, R.E., Lindquist, M. M., Lambdin, D. V., & Smith, N. L. (2014). Helping Children Learn Mathematics (11th Ed.). New York: John Wiley & Sons Inc.. ISBN : 978-1-118-65410

A student of this institution is not required under law to purchase a textbook from a university-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.

### **Course Requirements/Policies:**

**Attendance, Participation, and Professionalism are prerequisites for success as a classroom teacher and crucial to being successful in this class.**

1. **Class Participation/Attendance:** During our class, students will be required to participate in discussions, work collaboratively and cooperatively with classmates, participate in elementary math classroom lessons/activities, and prepare elementary math classroom lessons/activities.

Attendance at all classes is an expectation of the course and a future professional skill. Each class represents an opportunity to learn.

2. Chapter Assignments: Weekly reflections, quizzes, and/or math problem work will be submitted prior to each class meeting over the textbook chapters.

3. Projects: The student will be expected to present each of the following projects during class. Each project must include activities for all students and the instructor, all materials needed for a successful lesson, an appropriate lesson plan, and a copy of the lesson for each student in the class.

PowerPoint Presentation over fact fluency: The student will create a PowerPoint over fact fluency using appropriate technology and reference materials.

Learning Center: The student will create a Learning Center for their classmates and instructor and will include an appropriate lesson plan.

Cross Curricular Lesson: The student will create a lesson using a math based children's literature book which will include an appropriate lesson plan

Math Games: The student will create and share 3 math games for the class.

Math Scavenger Hunt: The student will apply mathematical learning strategies outside of the classroom by participating and creating a Math Scavenger Hunt.

4. Exams: There are two scheduled content exams. All exams must be taken on the assigned dates unless arrangements are made prior to the exam. If there is a documented emergency, contact the instructor within 24 hours of the exam.

\*All assignments are due on or before the dates provided in the Course Outline. Each assignment must be submitted in the Canvas assignment. No email attachments will be accepted. A penalty will be assessed for late work. Assignment dates may be moved to later (but not earlier) than the scheduled dates during the course of the semester. Any changes will be discussed with students in class.

**Evaluation:**

Class Participation	20%
Chapter Assignments	10%
Projects	40%
Exams	30%
TOTAL	100%

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

**Last Day to Withdraw is November 4, 2022.**

**UT Tyler Honor Code**

Every member of the UT Tyler community joins together to embrace: Honor and integrity that will not allow me to lie, cheat, or steal, nor to accept the actions of those who do.

For a full list of university policies including information related to the topics listed below, visit <http://uttyler.edu>

- Students Rights and Responsibilities
- Campus Carry

- Tobacco-Free University
- Grade Replacement/Forgiveness and Census Date Policies
- State-Mandated Course Drop Policy
- Disability Services
- Student Absence due to Religious Observance
- Student Absence for University-Sponsored Events and Activities
- Social Security and FERPA Statement
- Emergency Exits and Evacuation
- Student Standards of Academic Conduct

#### **UT Tyler Resources for Students:**

- UT Tyler Writing Center (903.565.5995), [writingcenter@uttyler.edu](mailto:writingcenter@uttyler.edu), <http://www.uttyler.edu/writingcenter/>
- UT Tyler Tutoring Center (903.565.5964), [tutoring@uttyler.edu](mailto:tutoring@uttyler.edu), <https://www.uttyler.edu/tutoring/>
- The Mathematics Learning Center, RBN 4021, This is the open access computer lab for math students, with tutors on duty to assist students who are enrolled in early-career courses.
- UT Tyler Counseling Center (903.566.7254) [http://www.uttyler.edu/counseling/University Guidelines, Links and Policies](http://www.uttyler.edu/counseling/University%20Guidelines,%20Links%20and%20Policies)

### **COLLEGE OF EDUCATION AND PSYCHOLOGY (CEP) VISION AND MISSION**

#### **Vision:**

The College of Education and Psychology is nationally recognized and respected for its academic programs and opportunities. It is a center of academic excellence, scholarly inquiry, and public service. The College prepares leaders to meet the critical challenges of the 21st Century through productive contributions to local and global communities and toward individual and cultural equity.

#### **Mission:**

The mission of the College of Education and Psychology is to provide a positive environment that fosters the acquisition of knowledge and skills. The mission is individually and collectively realized through a community of scholars that contributes to knowledge through scholarly inquiry; organizes knowledge for application, understanding and communication; and provides leadership and service. We affirm and promote global perspectives that value individual and cultural diversity to enhance learning, service, and scholarship.

### **UT TYLER'S SCHOOL OF EDUCATION STANDARDS FOR EDUCATOR PREPARATION PROGRAMS**

Texas Education Standards: The School of Education is committed to teaching and implementing the Texas Educator Standards at the highest level. The School of Education faculty use the Texas Education Standards, along with the Interstate New Teacher Assessment and Support Consortium (InTASC) standards used by educator preparation programs throughout the United States.



**Course Outline:**

<b>WEEK/ MODULE</b>	<b>10% - CHAPTER ASSIGNMENTS TO BE DONE BEFORE ATTENDING CLASS ON THURSDAY</b>	<b>20% - CLASS PARTICIPATION AND ATTENDANCE FOR FACE- TO-FACE MEETINGS ON EACH THURSDAY</b>	<b>30% - EXAM ADMINISTRATION  40% - PROJECT PRESENTATION</b>
<b>Week 1 Module: 8-22-2022 through 8-28-2022</b>	1. Read through Chapter 2, 3, 4 of your textbook, "Helping Children Learn Mathematics, 11th Edition".  2. Do assignments in Week 1 Module.	1. Class Introduction  2. Discuss Chapter 2,3, 4	
<b>Week 2 Module: 8-29-2022 through 9-4-2022</b>	1. Read Chapter 6: Helping Children With Problem Solving in your textbook, "Helping Children Learn Mathematics, 11th Edition".  2. Do assignments in Week 2 Module.	1. Bell Ringer/Exit Tickets  2. Discuss Chapter 6	
<b>Week 3 Module: 9-5-2022 through 9-11-2022</b>	1. Read Chapter 7: Developing Counting and Number Sense in Early Grades in your textbook, "Helping Children Learn Mathematics, 11th Edition".  2. Do assignments in Week 3 Module.	1. Bell Ringer/Exit Tickets  2. Discuss Chapter 7  3. Math Games	
<b>Week 4 Module: 9-12-2022 through 9-18-2022</b>	1. Read Chapter 8: Extending Number Sense: Place Value in your textbook, "Helping Children Learn Mathematics, 11th Edition".  2. Do assignments in Week 4 Module.	1. Bell Ringer/Exit Tickets  2. Discuss Chapter 8	
<b>Week 5 Module: 9-19-2022 through 9-25-2022</b>	1. Read Chapter 9: Operations: Meaning and Basic Facts in your textbook, "Helping Children Learn Mathematics, 11th Edition".  2. Do assignments in Week 5 Module.	1. Bell Ringer/Exit Tickets  2. Discuss Chapter 9  3. Manipulatives	

<p><b>Week 6 Module: 9-26-2022 through 10-2-2022</b></p>	<p>1. Read Chapter 10: Computation Methods and Chapter 11: Standard and Alternative Algorithms in your textbook, "Helping Children Learn Mathematics, 11th Edition".</p> <p>2. Do assignments in Week 6 Module.</p>	<p>1. Bell Ringer/Exit Tickets</p> <p>2. Discuss Chapter 10</p> <p>3. Learning Center Demonstration</p>	<p>PowerPoint Presentation over Fact Fluency</p>
<p><b>Week 7 Module: 10-3-2022 through 10-9-2022</b></p>	<p>1. Read Chapter 12: Fractions and Decimals: Concepts and Operations in your textbook, "Helping Children Learn Mathematics, 11th Edition".</p> <p>2. Do assignments in Week 7 Module.</p>	<p>1. Bell Ringer/Exit Tickets</p> <p>2. Discuss Chapter 11</p> <p>3. Math Outside of the Classroom</p>	<p>Exam over Week 1-7</p>
<p><b>Week 8 Module: 10-10-2022 through 10-16-2022</b></p>	<p>1. Read Chapter 13: Ratio, Proportions, and Percents: Meanings and Applications in your textbook, "Helping Children Learn Mathematics, 11th Edition".</p> <p>2. Do assignments in Week 8 Module.</p>	<p>1. Bell Ringer/Exit Tickets</p> <p>2. Discuss Chapter 13</p>	<p>Scavenger Hunt</p>
<p><b>Week 9 Module: 10-17-2022 through 10-23-2022</b></p>	<p>1. Read Chapter 14: Algebraic Thinking in your textbook, "Helping Children Learn Mathematics, 11th Edition".</p> <p>2. Do assignments in Week 9 Module.</p>	<p>1. Bell Ringer/Exit Tickets</p> <p>2. Discuss Chapter 14</p> <p>3. Authors of Children's Math Books and</p>	<p>Learning Center Project Presentations in Class</p>
<p><b>Week 10 Module: 10-24-2022 through 10-30-2022</b></p>	<p>1. Read Chapter 15: Geometry in your textbook, "Helping Children Learn Mathematics, 11th Edition".</p> <p>2. Do assignments in Week 10 Module.</p>	<p>1. Bell Ringer/Exit Tickets</p> <p>2. Discuss Chapter 15</p> <p>3. Cross Curricular Lesson Demonstration</p>	
<p><b>Week 11 Module: 10-31-2022 through 11-6-2022</b></p>	<p>1. Read Chapter 16: Measurements in your textbook, "Helping Children Learn Mathematics, 11th Edition".</p> <p>2. Do assignments in Week 11 Module.</p>	<p>1. Bell Ringer/Exit Tickets</p> <p>2. Discuss Chapter 16</p> <p>3. YouTube and other video resources</p>	<p>Cross Curricular Project Presentation in Class</p>

<b>Week 12 Module: 11-7-2022 through 11-13-2022</b>	1. Read Chapter 17: Data Analysis, Statistics and Probability in your textbook, "Helping Children Learn Mathematics, 11th Edition".  2. Do assignments in Week 12 Module.	1. Bell Ringer/Exit Tickets  2. Discuss Chapter 17	
<b>Week 13 Module: 11-14-2022 through 11-20-2022</b>	1. Read Chapter 18: Number Theory in your textbook, "Helping Children Learn Mathematics, 11th Edition".  2. Do assignments in Week 13 Module.	1. Bell Ringer/Exit Tickets  2. Discuss Chapter 18  3. Desmos	Math Games Presentation
<b>11-21-2022 through 11-27-2022</b>	Thanksgiving Holiday	Thanksgiving Holiday	Thanksgiving Holiday
<b>Week 14 Module: 11-28-2022 through 12-4-2022</b>	1. Do assignments in Week 14 Module over technology use in the classroom.	1. Bell Ringer/Exit Tickets  2. Geogebra	
<b>Week 15 Module: 12-5-2022 through 12-9-2022</b>			Final Exam over Week 8-15 (administered in class).