

ITE 324 Elementary Mathematics I  
Fall 2007  
Cohort 18

**Instructor:** Paul Tauiiili

**Dates:** August 27-Dec 10 (observed holidays, Labor Day, Columbus Day)

**Time:** 3:30-6:30

**Place:** Matafao School

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**Phone:** 252-7999 or 699-6072

**Office Hours:** Wednesdays - 2:30-4:00 pm

**TEXTBOOK:** Elementary Mathematics I & II, Dr. Neil Pateman

**TOPICS:**

Whole Number Development

Whole Number Operations

Algorithms for Addition and Subtraction

Algorithms for Multiplication and Division

Introduction to *Geometry and Measurement*

**EXPECTATIONS:**

ITE 324

1. Covers the TOPICS stated above so that you can gain the content knowledge needed to become a knowledgeable elementary mathematics teacher. You will also participate in class lectures, whole class discussions, and small group discussion about the theoretical as well as practical issues involved in teaching mathematics in an elementary school setting.
2. Will require you to implement what you have learned from this course in your respective classroom field placements. You will be required to complete both in class assignments as well as field-based assignments related to the topics of this course.

**QUESTIONS TO BE ADDRESSED:**

1. How do children learn mathematics?
2. What mathematics is worth knowing?

3. What are the connections between what is learned and how it is learned?
4. What is the role of the teacher in helping children learn mathematics?
5. How can books, manipulatives, and activities support children as they learn mathematics?
6. How can state and national standards be used in developing mathematics curriculum?

## COURSE REQUIREMENTS

**UNIT PLAN:** You will design and implement a 5-lesson unit plan. (this can be implemented in more than 5 days if need be) unit plan using the Backward Design Lesson plan format and Unit Overview format provided by your instructor. This Unit Plan must be implemented in your elementary field placement using the ASDDOE mathematics standards and appropriate curriculum for your grade level and be observed once by your field coordinator or coordinator. You will be graded on lesson plan components, detailed planning, implementation as well as reflection of your teaching moments. The Unit Plan must be approved by the instructor before implementation.

**LESSON PLAN:** You are required to plan and implement (2) two mathematics lesson plans in your elementary field placement. These **MUST** be taught before the unit plan and observed by your field coordinator or cohort coordinator. You will be graded on lesson plan components, detailed planning, implementation as well as reflection of your teaching moments. All lesson plans must be approved by your instructor before implementation.

**WORKSHOP:** You will be asked to participate in groups and/or individually to work on problem solving activities in class (most of these are from the text). Your group or you will be asked to hand in solutions to these problems when they are due.

**PRESENTATION:** You will be required to work as a group to plan and implement a math lesson to be presented to the class. Each lesson should reflect a chosen topic to be discussed with your instructor. You need to plan

with the instructor the week before you present otherwise you will not be allowed to present.

**MATHEMATICS ARTICLE REFLECTION:** You will be required to choose two mathematics articles from an approved journal of mathematics and reflect on its usefulness in helping your learn how to teach mathematics to children. 2 page minimum.

**QUIZ:** There will be announced quizzes throughout the length of this course to review discussions, readings, and important mathematical concepts.

**FINAL EXAM:** You will be given a comprehensive final examination covering all the content of this course.

<b><u>GRADING</u></b>	
<b><u>ASSIGNMENTS</u></b>	<b><u>POINTS</u></b>
UNIT PLAN	20
LESSON PLANS	20
WORKSHOPS	15
PRESENTATION	10
2 ARTICLE REFLECTIONS	10
QUIZZES	10
FINAL EXAM	15
<b>TOTAL POSSIBLE POINTS</b>	<b>100</b>

<b>A</b>	<b>90-100</b>
<b>B</b>	<b>80-89</b>
<b>C</b>	<b>70-79</b>
<b>D</b>	<b>60-69</b>
<b>F</b>	<b>0-59</b>

<b>TENATAIVE CALANDER</b>		
<b>Date</b>	<b>Topics</b>	<b>Work Due</b>
<b>August 27</b>	1. Introduction and review of syllabus 2. What is "COUNTING"? <ul style="list-style-type: none"> <li>• Discrete vs. Continuous</li> <li>• Classification or Sorting</li> <li>• Seriation or Ordering</li> <li>• 1 to 1 correspondence</li> <li>• Cardinal vs. Ordinal number</li> <li>• SNWS</li> </ul> 3. READ p.1-11 for the quiz 4. Start Workshop # 1	
<b>September 3</b>	HOLIDAY "Labor Day"	
<b>September 10</b>	1. Introduction to Whole Number operations 2. Introduction to base ten Blocks 3. Learning the importance of place value 4. Introduction to base ten Blocks 5. Review Detail Lesson Planning	1. Quiz on "Whole Number Development" 2. Workshop # 1 is Due
<b>September 17</b>	1. Whole Number operations Addition and Subtraction 2. Learning different types of ADDITION algorithms	1. Lesson plan One is Due
<b>September 24</b>	<ul style="list-style-type: none"> <li>• Whole Number operations Addition and</li> </ul>	Unit plan rough draft is due

	Subtraction <ul style="list-style-type: none"> <li>• Learning different types of SUBTRACTION algorithms</li> <li>• Presentation # 1</li> </ul>	
<b>October 1</b>	1. NUMERATION systems 2. ALgorithms Presentation # 2	Lesson Plan 2 is due
<b>October 8</b>	1. Addition and Subtraction Presentation # 3	Unit Plan final revisions
<b>October 15</b>	1. Multiplication Presentation # 4	Last day to turn in Lesson One Reflection and observation notes
<b>October 22</b>	1. Multiplication Presentation # 5	
<b>October 29</b>	1. Division Presentation # 6	Last Day to turn in Lesson two reflection and observation notes
<b>November 5</b>	1. Division Presentation # 7	
<b>November 12</b>	1. Division Presentation # 8	
<b>November 19</b>	Geometry and Measurement Presentation # 9	
<b>November 26</b>	Measurement	Last day to turn in Unit plan reflection and observation notes
<b>December 3</b>	Review for Final	
<b>December 10</b>	Final Exam	