



UNIVERSITI TEKNOLOGI MARA

MAE415: FUNDAMENTAL OF MATHEMATIC SKILLS FOR PRIMARY SCHOOL TEACHERS

Course Name (English)	FUNDAMENTAL OF MATHEMATIC SKILLS FOR PRIMARY SCHOOL TEACHERS APPROVED
Course Code	MAE415
MQF Credit	3
Course Description	no description provided
Teaching Methodologies	Lectures, Blended Learning, Discussion, Directed Self-learning
CLO	<p>CLO1 Analyze the important skills in the teaching and learning of mathematics.</p> <p>CLO2 Discuss how skills how to integrate the elements of the mathematics skills in the teaching and learning process.</p> <p>CLO3 Determine the use of mathematics skills in the teaching and learning of mathematics.</p> <p>CLO4 Provide suggestions on the application of the mathematics skills individually and creatively.</p>
Pre-Requisite Courses	No course recommendations
Topics	
<p>1. Introduction to Measurement</p> <p>1.1) General concepts of measurement.</p> <p>1.2) Importance of measurement</p> <p>1.3) Difference between area measurements and linear measurements</p>	
<p>2. Teaching of Measurement</p> <p>2.1) • method in teaching measurement in their classroom.</p> <p>2.2) • common misconceptions in the learning of measurement.</p>	
<p>3. Length and Perimeter</p> <p>3.1) • device activities to compare length and perimeter.</p> <p>3.2) • standard units and non-standard units of measure.</p> <p>3.3) • develop practical activities to demonstrate.</p> <p>3.4) • solve problems involving measuring length.</p>	
<p>4. Area</p> <p>4.1) • concept of area</p> <p>4.2) • development of skills to measure area</p> <p>4.3) • estimation of perimeter and area</p> <p>4.4) • relationship between perimeter and area</p> <p>4.5) • formulation of area measurement</p>	
<p>5. Volume and Capacity</p> <p>5.1) • volume and capacity estimates.</p> <p>5.2) • measure capacity and volume.</p> <p>5.3) • calculations involving capacity and volume.</p> <p>5.4) • develop concepts of volume and capacity for teaching.</p>	
<p>6. Volume and Surface Area</p> <p>6.1) • notion of surface area and volume.</p> <p>6.2) • terminology used with surface area and volume.</p> <p>6.3) • surface area and volume of different prisms.</p> <p>6.4) • solve problems related to volume and surface.</p> <p>6.5) • history and application of solid figures.</p>	

<p>7. Mass and Weight 7.1) • Intro to mass and weight 7.2) • Usage of metric standard units and SI basic units 7.3) • measure the mass of objects using non-standard and standard units 7.4) • make and use estimates of masses of objects.</p>
<p>8. Time 8.1) • explore the concept of time. 8.2) • use standard units for determining intervals of time. 8.3) • deal with recorded time as measured by the clock.</p>
<p>9. Three Phases for Teaching Measurement 9.1) • Phase 1: Identify the attribute 9.2) • Phase 2: Learn to measure 9.3) • Phase 3: Learn to calculate</p>
<p>10. Measurement Length 10.1) • Identifying the attribute of length 10.2) • Learning to measure 10.3) • Choosing appropriate math tools</p>
<p>11. Units and conversions 11.1) • System International units (SI) of measure. 11.2) • Conversion from one measure to another.</p>
<p>12. Appropriate Measurement Tools 12.1) • Choosing Appropriate Measurement Tools. 12.2) • PCK Tools for Measurement.</p>
<p>13. Student Misconceptions and Strategies for Teaching 13.1) • General misconceptions concerning measurement. 13.2) • Misconceptions relating to length 13.3) • Misconceptions Relating to area 13.4) • Misconceptions relating to volume 13.5) • Strategies for addressing student misconceptions.</p>
<p>14. Problem Solving in Measurement 14.1) • stages involve in problem solving. 14.2) • different strategies use in solving a problem. 14.3) • phases of the problem solving processes. 14.4) • solve non-routine problems.</p>

Assessment Breakdown	%
Continuous Assessment	60.00%
Final Assessment	40.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Assignment	Assignment or project	30%	CLO1 , CLO2 , CLO3 , CLO4
	Discussion	i class discussion	10%	CLO1 , CLO2 , CLO3 , CLO4
	Quiz	Quiz on 2nd meeting and 4th meeting	20%	CLO1 , CLO2 , CLO3 , CLO4

Reading List	This Course does not have any book resources
Article/Paper List	This Course does not have any article/paper resources
Other References	This Course does not have any other resources