



UNIVERSITI TEKNOLOGI MARA

MAE413: INTRODUCTION TO SHAPE AND SPACE FOR PRIMARY SCHOOL TEACHERS

Course Name (English)	INTRODUCTION TO SHAPE AND SPACE FOR PRIMARY SCHOOL TEACHERS APPROVED
Course Code	MAE413
MQF Credit	3
Course Description	The purpose of this course is to provide learners (prospective teachers) with a basic knowledge of shape and geometry to assist them in acquiring skills and techniques for using, understanding and solving geometry problems in real life situations. Geometric thinking is a powerful tool for understanding and solving both mathematical and applied problems, and offers alternate ways of reasoning mathematically, beyond algebra, including analytical and spatial reasoning. This offers the opportunity to develop skill in reasoning and formal proof. Additionally, it helps learners to describe, analyze, and recognize the underlying beauty in the structures that compose our world. The focus of the course will be on developing conceptual understanding of shape and geometry and the application of acquired skills in educational settings. Major areas to be covered include basic concepts such as shape and geometry in 2D and 3D, misconceptions facing by students in learning geometry and the application of pedagogical content knowledge in the teaching of these concepts.
Transferable Skills	Thinking skills
Teaching Methodologies	Lectures, Blended Learning, Discussion, Directed Self-learning
CLO	CLO1 Explain basic concepts of shape and geometry both in 2D and 3D CLO2 Discuss the misconceptions of shape and geometry both in 2D and 3D CLO3 Use materials, media and technology in constructing shape and geometry in 2D and 3D. CLO4 Construct Pedagogical Content Knowledge for the teaching of shape and geometry in 2D and 3D
Pre-Requisite Courses	No course recommendations
Topics	
1. Introduction to Course 1.1) What is geometry	
2. History of geometry 2.1) n/a	
3. Importance of geometry 3.1) n/a	
4. Idea of Dimension 4.1) n/a	
5. 2D shape and Geometry 5.1) n/a	
6. 3D shape and geometry 6.1) n/a	
7. Perspective of Piaget 7.1) n/a	
8. Perspective of Van Hiele 8.1) n/a	
9. Symmetry of geometry 9.1) n/a	

10. Misconception of shape and geometry 10.1) n/a
11. Pedagogical Content Knowledge 11.1) n/a
12. Method used to teach Shape and Geometry 12.1) n/a

Assessment Breakdown	%
Continuous Assessment	60.00%
Final Assessment	40.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Assignment	Assigned task	20%	CLO1 , CLO2 , CLO3 , CLO4
	Discussion	n/a	10%	CLO1 , CLO2 , CLO3 , CLO4
	Quiz	The quizzes are conducted on the 2nd and 4th meeting	30%	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