



UNIVERSITI TEKNOLOGI MARA

MAE424: BASIC DISCRETE MATHEMATICS FOR PRIMARY SCHOOL TEACHERS

Course Name (English)	BASIC DISCRETE MATHEMATICS FOR PRIMARY SCHOOL TEACHERS APPROVED
Course Code	MAE424
MQF Credit	3
Course Description	Calculus explains methods for solving problems that are "continuous" in nature where variables span values on an entire interval. On the other hand, finite mathematics explains methods we can apply when our problems are "discrete" in nature where variables take on only a finite number of values or a sequence of possible values. These problems often arise in computer science, economics, and optimization. In this course we will discuss some fundamental ideas in Discrete Mathematics. Topics include logic and proofs, set and functions, sequences and summations, mathematical induction, graphs and trees.
Transferable Skills	Reflective Learner Independent and Critical Thinker Expert in Field
Teaching Methodologies	Lectures, Tutorial, Web Based Learning
CLO	CLO1 able to construct mathematical arguments CLO2 able to prove simple arguments CLO3 able to develop recursive algorithms based on mathematical induction CLO4 able to know basic properties of relations CLO5 able to know essential concepts in graph theory and related algorithms CLO6 able to apply knowledge about discrete mathematics in problem solving
Pre-Requisite Courses	No course recommendations
Topics	
1. Logic and proof 1.1) Proposition, equivalent statement, predicate and quantifiers, inference rule and introduction to proof.	
2. Set, function, sequence and summation 2.1) Sets, set operation, function, sequences and summation	
3. Induction and recursive 3.1) Introduction to induction and recursive	
4. Relationship 4.1) Type of relations and their properties, reflexive, symmetric, antisymmetric and reflection	
5. Graph 5.1) Introduction to type of graph and their properties	
6. Tree 6.1) Introduction to tree.	

Assessment Breakdown	%
Continuous Assessment	60.00%
Final Assessment	40.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Assignment	n/a	15%	CLO1 , CLO2 , CLO3 , CLO4 , CLO5
	Discussion	i-Class	10%	CLO1 , CLO2 , CLO3 , CLO4 , CLO5 , CLO6
	Test	Test 1	15%	CLO1 , CLO2
	Test	Test 2	20%	CLO3 , CLO4

Reading List	Recommended Text	
	Reference Book Resources	

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