

## **Faculty of Computers and Information Technology**

## **Discrete Mathematics**

Information :

Course Code :	BMT 112	Level	:	Undergraduate	Course Hours :	3.00- Hours
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Department :	Faculty of Computers	and Information Technology				

## Instructor Information :

Title	Name	Office hours
Associate Professor	Khaled Ahmed Mohamed Elshafey	2
Teaching Assistant	Linah Mohammed Ibrahim Elsayed Ahmed Elnaghi	
Teaching Assistant	Hoda Ashraf Mohamed Mohamed Mostafa	
Teaching Assistant	Warda Mustafa Saied Mahmoud	
Teaching Assistant	Farah Ashraf Wafaa Mahmoud	

## **Description :**

The course provides the concept of Preliminaries. Topics covered in this course are sets, binary relations, functions, summations, matrices; Logic: language of logic, quantifiers, advanced induction; Formal Logic: propositional calculus, Boolean algebra; Algorithms: pseudo-code language, recursive algorithms; Graph Theory: graphs, digraphs, paths, cycles, adjacency matrices, connectivity, trees, graph algorithms; Enumeration: permutations, combinations, inclusion/exclusion, Binomial Theorem, combinatorial identities; Group Theory: groups, subgroups, cosets, Lagrange**\$** Theorem, quotient groups; Difference Equations/Recurrence Relations: basic types of recurrences/difference equations and solution methods.