

## Faculty of Computers and Information Technology

### Discrete Mathematics

#### Information :

**Course Code :** BMT 112

**Level :** Undergraduate

**Course Hours :** 3.00- Hours

**Department :** Faculty of Computers and Information Technology

#### Instructor Information :

Title	Name	Office hours
Professor	Tarek Ahmed Mahmoud Mohamed	
Associate Professor	Khaled Ahmed Mohamed Elshafey	3
Teaching Assistant	Hoda Ashraf Mohamed Mohamed Mostafa	
Teaching Assistant	AHMED SAMY ALSAIED ALI ABORAGB	
Teaching Assistant	Tasnim Salah Abdelraaouf Mahmoud Kandil	

#### 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's Theorem, quotient groups; Difference Equations/Recurrence Relations: basic types of recurrences/difference equations and solution methods.