**DISCRETE MATHEMATICS**

Purpose

Introduce simple mathematical basics to the Computer Science domains.

What do we expect?

Explain with examples the basic terminologies of functions, relations and sets.

Convert logical statements from the formal language to propositional and predicate logic expressions.

Apply formal methods of symbolic propositional and predicate logic such as calculating validity of formula and completing normal forms.

Identify the proof technique used in a given proof.

Illustrate by example the basic terminology of graph theory as well as some of the properties and special cases of each type of graph.

Describe and analyze computer programs in a form mathematical manner.

Course outline

1.Sets, relations and functions.

2.Basic Logic.

3.Proof techniques.

4Graph and trees.