

## Course Syllabus

<b>Program of Study</b>	Bachelor of Science (Computer Science)
<b>Faculty/Institute/College</b>	Mahidol University International College
<b>Course Code</b> ICCS 324	<b>Course Title</b> Discrete Structures
<b>Number of Credits</b>	4 ( <b>Lecture / Lab</b> ) (4-0)
<b>Prerequisite (s)</b>	none
<b>Type of Course</b>	Required Major courses
<b>Trimester / Academic Year</b>	Trimesters 1 & 2 every year
<b>Course Description</b>	

Applied modern algebra with specific attention to applications in computer science; topics include logic, set algebra, equivalence relations and partitions, functions, mathematical induction, elementary number theory, basic combination method, trees and graphs, finite state machines.

### Course Objective (s)

The course is designed to introduce the concept of discrete mathematics.

### Course Outline

Week	Topic		Instructor
	Lecture	Hour	
1	Sets, Operations on sets, sequences	4	
2	Division in integers, matrices, mathematical structures	4	
3	Logic: methods of proof, mathematical induction	4	
4	permutation, combination	4	
5	Recurrence Relations, probability	4	
6	product sets, relations and digraphs, properties of relations	4	
7	Equivalence relations	4	
8	Operations on relations and structures	4	
9	Trees	4	
10	Graphs and graph theory	4	
11	Finite state machines	4	
	Total	44	

### Teaching Method (s)

Lectures

### Teaching Media

Transparencies, handouts and lecturing from boards

**Measurement and evaluation of student achievement**

Assessment made from the set-forward criteria: student who gets 85% and above will have Grade A.

**Course evaluation**

A suggestive minimum of;

Midterm examination	40%
Final examination	50%
Quizzes	10%

**Reference (s)**

Bernard Kolman; Discrete Mathematical structures, 4<sup>th</sup> ed.

**Instructor (s)**

TBA

**Course Coordinator**

TBA