

## MMAT5210 Discrete Mathematics

### § 0 Overview

Discrete Mathematics :

- Study of mathematical structures that are discrete rather than continuous, such as integers, graphs and etc.
- "Exclude" calculus and analysis.

Topics :

Set theory	Discrete geometry	..
Logic	Game theory	
Number theory	Probability	
Algebra	Combinatorics	
Cryptography	Graph theory	
Coding theory	Theoretical computer science	

Each topic can become a course !

What are we going to do ?

- Choose some topics and have a brief discussion
- Explore more the topics you find interesting !

References .

- [1] Discrete Mathematics and Its Applications 7th Ed. , Kenneth H Rosen
- [2] Introduction to Cryptography with Coding Theory 2nd Ed. , Wade Trappe and Lawrence C. Washington
- [3] Elementary Set Theory , L.T. Leung and Doris L.C. Chen
- [4] A First Course in Abstract Algebra 7th Ed. , John B. Fraleigh