

MA2214—Combinatorial Analysis

Semester 2, 2008/2009

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Office hours, Weeks 1 and 2:

Tuesday, 9:00–11:00

Semi-official course description

Combinatorics is the study of ways to group and arrange objects to make it easier to count them. The main objective of this module is for students to learn some interesting and useful principles and techniques in counting with applications to operations research and computer science.

Major topics: Permutations and combinations. Binomial and multinomial coefficients. The Pigeonhole Principle. Ramsey numbers. The Principle of Inclusion and Exclusion. Ordinary and exponential generating functions. Recurrence relations.

Textbook

We will be using *Principles and Techniques in Combinatorics* by Chen Chuan-Chong and Koh Khee-Meng. This text is required and will be available in the bookstore.

Grading scheme

- One final exam (May 2, 9:00 a.m.) worth 65%.
- One midterm exam worth 30%.
- Tutorial participation worth 5%.

The midterm will be given in Week 6. The exact date will be announced on IVLE and in lecture by the end of the first week of class.

Classroom policies

Please do not use electronics (hand phone, tape recorder, etc.) in the classroom without permission.

Thoughts

Mathematics is not a spectator sport. If you simply listen to the lectures and do not try the problems yourself, you will not understand the material as well and will almost certainly be at a disadvantage on the exams.

Any changes to this document will be announced on IVLE and in class.