

Introduction to Combinatorics

Math 4160

Announcements:

The midterm exams will be on Friday, January 31 and Friday, March 7

Topics: algebra of sets, permutations, combinations, occupancy problems, partitions of integers, generating functions, combinatorial identities, recurrence relations, inclusion-exclusion principle, Polya's theory of counting, permanents, systems of distinct representatives, Latin rectangles, block designs, finite projective planes, Steiner triple systems.

York University
 Professor Mike Zabrocki
 MWF 10:30-11:30am FC-034C
 Office: Ross S615
 Office hours: MW4-5pm
 or by appointment
 Best way to contact me:
 zabrocki@mathstat.yorku.ca

Prerequisites: AS/SC/AK/MATH 2022 3.0 or AS/SC/AK/MATH 2222 3.0; six credits from 3000-level MATH courses (without second digit 5); or permission of the course coordinator.

Text: An introduction to combinatorics by Alan Slomson

The grade in this course will be based on the following criterion:

1. Homework (5) 20%
2. Midterm exams (2) 40%
3. Final exam 40%

The homework is for your benefit so it is in your interest to spend some time doing the problems each week.

Struggle with them for a while before getting help from either myself, the TA, or your fellow students. Do not copy homework assignments.

| Week | Topic/sections in text | Homework | Solutions |
|------|---------------------------|----------|-----------|
| 1 | Basic counting principles | | |