

PLEASE NOTE: We may have to revise the course plan according to the countrywide reassessment to be made regarding higher education. This is expected to happen at the beginning of April. The content to be delivered is certain but the method of course delivery, the number and dates of exams, and some other details are subject to change.

SABANCI UNIVERSITY, Spring 2023 MATH 318 – Introduction to Combinatorics

Lecturer: Kağan Kurşungöz
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Office: FENS 2010
Office Hours: by appointment.

Class Hours: T 8:40 a.m. – 9:30 a.m. (FENS L 029 and online)
zoom link: <https://sabanciuniv.zoom.us/j/95920331185>
W 9:40 a.m. – 11:30 a.m. (FENS L 056 and online)
zoom link: <https://sabanciuniv.zoom.us/j/98742314693>

Textbooks: Introductory Combinatorics, Richard A. Brualdi, Prentice Hall;
Integer Partitions, George E. Andrews and Kimmo Eriksson, Cambridge Univ. Press.

Aim of the Course: We will discuss the following topics as time allows:

- Basics: Principles of counting, the pigeonhole principle, binomial coefficients, inclusion-exclusion, recursion, generating functions.
- Integer partitions: Euler's theorem, Ferrers graphs, generating functions, Gaussian polynomials, Durfee squares, Rogers-Ramanujan identities, plane partitions.
- Graph theory (if time).

Grading: Your grade exclusively depends on the below listed items. There will be no other extra-credit opportunities.

Midterm	25 %
Final	25 %
Presentation + HW audit	25 %
Homeworks	25 %

Exams: The date and time for the first midterm will be announced in due course.

The information about the finals will be available later. Student resources will determine the dates× for all final exams, and instructors cannot change it. So, do not plan to leave İstanbul before the end of the finals period. I will not accommodate travel arrangements, or other personal business.

Makeup Exams: A makeup exam may be planned for valid excuses.

Homeworks: Homeworks will be assigned question by question in the lectures. They are due before the following Tuesday's class. There will be a dropbox on SUCourse for scanned-to-pdf's. Late homeworks may be accepted with a penalty, or may not be accepted at all. Two lowest homework scores will be dropped. Students may be summoned to explain their homework solutions.

Academic Integrity: All university policies on academic integrity apply to our course (more information on <http://www.sabanciuniv.edu/en/academic-integrity-statement>), and they will be enforced.

In particular, no form of cheating is welcome on the homeworks such as copying whole or part of each other's answers, submitting answers that are available online etc. Such behavior will be punished.

Extra Help: You are more than welcome to utilize the office hours.