

UNDERGRADUATE SEMINAR IN COMBINATORICS

Michael Krivelevich

Spring Semester 2012

Course number: 0366-3405

When and where: Tuesdays 10-12, Dan David 204.

Prospective audience: the seminar is intended for third year undergraduate students in Mathematics or Computer Science.

Prerequisites: first year courses in mathematics, most notably Discrete Mathematics or Introduction to Combinatorics. Working knowledge of basic graph theory notions (as provided for example by the Graph Theory course) would be very helpful.

Requirements and grade: Each participant will be assigned a topic and will deliver a lecture covering this topic; he/she will also be asked to prepare lecture notes for his/her lecture to be distributed in the class at the lecture, and to give a short home assignment to be solved by other students and graded by the lecturer. Participants are required to attend most of the seminar meetings. The final grade will be given based on the quality of the lecture and of the lecture notes, and solutions of home exercises.

Short description

The seminar will be devoted to a variety of topics in Graph Theory and Combinatorics, that are normally not covered by our Graph Theory course. The subjects to be presented will be quite diverse and essentially unrelated.

The seminar's aim is to acquaint its participants with attractive theorems, proofs and techniques from Graph Theory and Combinatorics, and also to provide them with an opportunity to work independently with advanced textbooks and research papers.

Bibliography

1. M. Aigner and G. Ziegler, Proofs from the Book, Springer.
2. J. Matoušek and J. Nešetřil, Invitation to Discrete Mathematics, Oxford University Press.
3. J. Van Lint and R. Wilson, A course in Combinatorics, Cambridge University Press.
4. D. West, Introduction to Graph Theory, Prentice Hall.