

Course Outline — Fall 2012

Math 580 (Combinatorial Mathematics, Fall 2012)

MWF: 12:00 pm - 12:50 pm, Altgeld Hall 447

József Balogh, 233B Illini Hall, jobal@math.uiuc.edu,

Office Hours: by appointment. Suggested hours: Wednesday 2-3pm, Friday 2-3pm and during study session. It is planned to have problem sessions, Mondays 3-5:00pm AH 145.

Web page: <http://www.math.uiuc.edu/~jobal>.

Syllabus: This is a rigorous, graduate level introduction to combinatorics. It does not assume prior study, but requires mathematical maturity; it moves at a fast pace. The first third of the course is on enumeration. The second third covers graph theory. The remainder of the course considers some topics that are treated more in depth in advanced graduate courses (Math 581, 582, 583, 584): Ramsey theory, partially ordered sets, the probabilistic method and combinatorial designs (as time permits).

Final exam: December 18: 7:00-10:00 PM, Tuesday.

Textbook: The FALL 2012 edition of the text COMBINATORIAL MATHEMATICS (by Douglas West) will be available at TIS Bookstore (707 S. 6th St.) It is 4th edition for USD 40,

REQUIREMENTS: A raw score of 80% or higher guarantees an A while a score of 60% or higher guarantees a B- (grade drops by 5%). (Near) weekly assignments. Each assignment will have 6 problems of your choice of 5/6 are graded.

There are 12 homework assignments, each worth 6%, a midterm 8% and a final exam for 20%.

The gradings: 80%– : A, 75%– : A⁻, 65%– : B⁺, 60%– : B, etc.

Note that the writings of the solutions must have a high quality and be typed, if the argument is messy or not typed then even if the solution is correct it could be returned without grading with 0 points.

Late homework policy: In case the homework is not submitted on time, it could be submitted for the next class, with losing 10% of the score. If there is official or medical reason then try to notify me in advance via e-mail.

RESOURCES: Electronic mail is a medium for announcements and questions.

PREREQUISITES: There are no official prerequisites, but students need the mathematical maturity and background for graduate-level mathematics.