

## COURSE DESCRIPTION - SPRING 2014

### MATH 413 - INTRODUCTION TO COMBINATORICS

**Sections C13 and C14: 10:00-10:50 MWF, 445 Altgeld Hall**

**Sections D13 and D14: 11:00-11:50 MWF, 345 Altgeld Hall**

Instructor: Bernard Lidický, 222 Illini Hall, 244-5468, lidicky@illinois.edu

Web page: <http://www.math.uiuc.edu/~lidicky/413/>

Office hours: 10:00-11:00 T, 12:00-1:00 W

Final Exam: 8:00-11:00 AM, Monday, May 12 2014 (C13 and C14)

Final Exam: 8:00-11:00 AM, Friday, May 16 2014 (D13 and D14)

The aim of this course is to give an introduction to finite mathematics, like enumerations, sieve method, designs and other symmetric configurations, (no or very little about graphs). We emphasize techniques, but also present proofs of theorems. Detailed outline of the course is available here: <http://www.math.uiuc.edu/Bourbaki/Syllabi/syl1413.html> We will follow the textbook by Brualdi.

PREREQUISITES: MATH 347 or MATH 348; or equivalent

TEXT: **R. A. Brualdi: Introductory Combinatorics (5th edition)** Older versions may serve well too.

REQUIREMENTS: There will be roughly 10 homework assignments, three exams and one makeup exam during semester. The class will end with a final exam. Homework assignments will be typically assigned on Wednesday and you will be given one week to finish them. Do not assume any homework will be dropped. If you need, you may submit your homework assignment sooner or you can email me a scanned or typed version of your work as one pdf file. It will be accepted as long as it arrives to my mailbox before the deadline in class. The weighting is homework 30%, midterms 45% and final 25%. Additionally, there will be a short quiz every Friday (not graded). Grades thresholds are 90% for A, 80 % for B, 70% for C and 60% for D. Below 60% is F.

TYPICAL WEEK: On Mondays will be normal lectures and help sessions in the evening from 5pm to 6pm (room will be announced later). On Wednesdays, HW is due and new HW is assigned. On Fridays will be a short quiz and HW solution will be distributed. A surprise short quiz can be also on Monday or Wednesday.

RESOURCES: Electronic mail is a medium for important announcements and questions. Please, watch the webpage of the class, which contains important announcements, HW assignments, and lecture log. Monday evening collaborative study sessions are offered to aid students in understanding the material and solving problems. Your score from homework assignments and exams will be posted on the department grading system: <https://www-s.math.illinois.edu/grades/grades.cgi>.

4 CREDITS: One has to register (soon!) in the Math Office at Altgeld to take 4 credits.