

Math 850: Combinatorics

Fall 2009 Section 001 — University of Nebraska–Lincoln — Course Policies

INSTRUCTOR: Stephen Hartke

OFFICE: 339 Avery Hall, PHONE: 402-472-7001, EMAIL: hartke@math.unl.edu

COURSE WEBPAGE: www.math.unl.edu/~shartke2/teaching/math850

OFFICE HOURS: Mon, Wed, Fri 10:30am–11:20am, or by appointment.

MEETING TIMES: Mon, Wed, Fri 9:30am–10:20pm in Avery Hall Room 109

FINAL EXAM: Tue Dec 15 10:00am–12:00pm in Avery Hall Room 109

TEXT: *Combinatorial Mathematics* by Douglas B. West (prepublication version).

COURSE OVERVIEW:

This course is a graduate-level introduction to the questions of existence and enumeration of finite discrete mathematical objects. Topics include basic counting principles, binomial coefficients and other basic counting sequences, inclusion-exclusion, recurrence relations, generating functions, systems of distinct representatives, pigeonhole principle, Ramsey theory, posets, codes, combinatorial designs, and applications. The course is designed to develop not only the students' computational ability, but also their ability to understand and manipulate abstract concepts through the use of proof.

COURSE REQUIREMENTS:

Homework will be assigned weekly. The homework provides practice finding proofs and writing proofs; writing up the solutions is among the most effective ways of keeping up with the material in the course. Discussion with other students is a great way to better understand a problem and to get ideas, but each student must write his or her submission individually. Late homework will not be accepted.

There will be two evening tests; they are tentatively scheduled for the weeks of Oct 5 and Nov 16. The final exam will be cumulative over the entire semester. Makeup tests will only be given in the case of extreme illness or other hardship. The decision to give makeups is at the discretion of the instructor.

The different components contribute to the final grade as follows: homework assignments (lowest score dropped): 44%; two tests: 17% each; final exam: 22%.

All students are expected to be aware of and abide by the University's policies on student conduct and academic integrity and honesty.

RESOURCES:

Announcements will be made in class and posted on the course webpage. Some announcements may also be sent to the student email address listed on WAM. The course webpage will also have handouts and a log of the topics covered each day. Blackboard (my.unl) will be used for posting grades.

Collaborative study sessions are a great opportunity to discuss ideas with students and get individual help from the instructor. Study sessions will be held each week.

STUDENTS WITH DISABILITIES:

Students with disabilities are encouraged to contact the instructor for a confidential discussion of their individual needs for academic accommodation. It is the policy of the University of Nebraska–Lincoln to provide flexible and individualized accommodation to students with documented disabilities that may affect their ability to fully participate in course activities or to meet course requirements. To receive accommodation services, students must be registered with the Services for Students with Disabilities (SSD) office, 132 Canfield Administration, 472-3787 voice or TTY.