**Math-548, Combinatorics**

Fall 2021

MWF 1:25pm-2:15pm, PH-0332

**Instructor**: Andrey Smirnov

PH 307A   
 asmirnov@email.unc.edu

**Office Hours**: Fr 3:00 or by appointment. Office hours are intended to help you get unstuck — not started — on homework problems.

**Prerequisite**: Math 381.

**Text**: R. A. Brualdi: Introductory Combinatorics, 5th edition

**Final** (according to UNC exam schedule): TBA

**Goals.** In this course we will explore counting principles, permutations, combinations, variations, binomial coefficients, recursions, generating functions, Catalan numbers, SDRs, and combinatorial design.

**About the course.** I will lecture on the key points and difficult concepts, but you will *need to read the textbook* for more details and *review your class notes* regularly. Questions in class are encouraged.

**Homework**: Weekly homework will be assigned. Your score on each problem will be based upon correctness and the quality of your presentation. No late HW will be graded.

**Group study** is encouraged. Collaboration on homework, or consulting a tutor or MHC is permitted. These rights, though, come with two responsibilities:

1. Write up your final solution independently from your collaborators. Copied work is unacceptable.
2. Acknowledge all collaborators and tutors by listing their names at the start of your solution.

Failure to shoulder these responsibilities constitutes an Honor Principle violation and will be dealt with accordingly.

**Midterms**: The tentative dates of the two midterms are September 20, October 25. There will be no make-up midterms.

**Grades** will be based on a total of 500 points.

Written Homework 100

Midterms (2) 200

Final 200

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Total 500

I expect that 60% would suffice for a D, 70% for a C, 80% for a B, and 90% for an A.

**No electronic devices** allowed in class.

It is expected that each student will conduct him or herself within the guidelines of the **Honor System**. All academic work should be done with the complete honesty and integrity that this University demands.