

MATH 5473 – Combinatorics
Section 01, Fall 2007
MWF 1:00 pm – 1:50 pm 302 Boyd Bldg

Prerequisites: Math 3003.

Instructor: Dr. Rui Xu

Office: 311 Boyd Bldg

Phone: (678)839-4122

E-mail: xu@westga.edu

Website: <http://www.westga.edu/~xu/>

Office hours: MWF: 9:30 am – 10:00 am; 10:50 am – 12:00 pm; 1:50 pm – 2:30 pm; Thursday: 10:20 am – 12:30 pm; 1:20 pm – 2:10 pm or by appointment.

Textbook: Introductory Combinatorics, by Richard A. Brualdi, Fourth Edition, Pearson Education, Inc. 2004.

Course Description: An introduction to combinatorics. Topics include the pigeonhole principle, combinations, permutations, distributions, generating functions, recurrence relations, and inclusion-exclusion.

Objectives:

- (I) A thorough understanding of the Pigeonhole Principle. (L2)
- (II) An understanding of permutations, combinations. (L7, L10)
- (III) An understanding of the Binomial Coefficients. (L5, L10)
- (IV) The ability to use Inclusion-Exclusion in applications (L9, L10)
- (V) A thorough introduction to the theory of recurrence and generating functions. (L7, L9)
- (VI) An introduction to graph theory. (L7, L10)

Grading Methods: Grades will be assessed based on a total of 570 points, using the standard decade scale: (90–100%=A, 80–89%=B, 70–79%=C, 60–69%=D, below 60%=F).

Test 1 (September 7, Friday)	100pts
Test 2 (October 3, Wednesday)	100pts
Test 3 (November 2, Friday)	100pts
Test 4 (December 3, Monday)	100pts
Final (December 7, Friday, 11:00 am – 1:00 pm)	150pts
Homework	100pts
Attendance	20pts

Homework & Test policy: Homework is due every meeting Friday. Late homework is not accepted. Homework may be graded partially or totally. I may grade a specific problem or just look for completeness. I am interested in the solution of problems not just their answers. So you need to show your work in details to get credits. The lowest test will be dropped, no make-up test.

Other Policies:

1. Class attendance will be taken every class day. You are not allowed to come to class late or to leave early. If you miss class for any reason, it is your responsibility to get the lecture notes from a classmate, read the text, and do the homework. You are allowed to miss at most 3 classes to get the full 20pts for attendance.
2. Pagers or cell phones should be set to an inaudible setting.
3. If you are a person with any kind of disability and anticipate needing any type of accommodation to participate in this class, please let me know and make appropriate arrangements with Disability Services.

Important Dates:

- August 15 – 21 : Drop/Add and late registration
- September 3 : Labor Day (offices closed, no classes)
- October 8 : Last day to withdraw with a grade of W
- October 11, 12 : Fall break (no classes, offices open)
- November 21-23 : Thanksgiving recess (no classes)
- December 5 : Last day of class
- December 6 : Reading Day